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FILE COVERS 1907 - 1 Oct 2007 VOL 147 ISS 15
FILE LAST UPDATED: 30 Sep 2007 (20070930/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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L74 ANSWER 1 OF 15 HCPLUS COPYRIGHT 2007 ACS on STN
AN 2005:1240634 HCPLUS Full-text
DN 143:479459
TI Highly corrosion-resistant compositions for coating non-chromated steel surface without interfering the welding ability and their formation

IN Sasaki, Kenichi; Miyoshi, Tatsuya; Yoshimi, Naoto

PA JFE Steel Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 58 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2005325427	A	20051124	JP 2004-146335	20040517 <--
PRAI	JP 2004-146335		20040517		

AB The steel (particularly automobile panel) surface is coated by a base layer and a top layer where the base layer is obtained from: (a) the reaction product of the condensation product of a polyalkylene glycol having specific mol. weight, a bisphenol-type epoxy resin, a compound containing active H and a polyisocyanate with an epoxy resin and an active H-containing hydrazine derivative in aqueous dispersion, (b) silane coupler, and (c) phosphoric acid or/and hexafluorometallic acid, and the top layer is obtained from epoxy group-containing resins having Mn 6000-20,000, Cr-free corrosion inhibitors, lubricants having mol. weight of <5000 and elec. conductive pigments.

ICM C23C0022-07

ICS C23C0022-22; C23C0022-36; C23C0022-42; C23C0028-00

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55

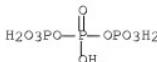
ST corrosion resistant base coat top coat multilayer coating steel;

- welding property steel coating anticorrosive polyalkylene glycol epoxy resin; hydrazine deriv reaction modified epoxy resin coating steel; automobile panel steel anticorrosive coating polyisocyanate polyoxyalkylene epoxy resin
- IT Coating materials
 (anticorrosive; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT Automobiles
 (bodies; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT Silanes
 RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agents; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT Polyoxyalkylenes, uses
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (epoxy; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT Coupling agents
 (highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT Aminoplasts
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT Epoxy resins, uses
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (polyoxyalkylene; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT Galvanized steel
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT 97-77-8, Tetraethylthiuram disulfide 7631-86-9, Silica, uses
 29196-72-3, Aluminum tripolyphosphate 130638-76-5,
 Aluminum phosphomolybdate
 RL: MOA (Modifier or additive use); USES (Uses)
 (corrosion inhibitor; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT 919-30-2, KBE 903 1760-24-3, KBM 603 2530-83-8
 , KBM 403 2602-34-8, KBE 403 2397-60-1, KBM 402
 3069-29-2, KBM 602
 RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agent; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT 822-06-0, HMDI 4098-71-9, IPDI 9003-08-1, Melamine resin 93919-05-2,
 Desmodur BL-3175 124671-40-5, Takenate B 870N 174514-92-2, Duranate
 MF-B 80M

- RL: RCT (Reactant); RACT (Reactant or reagent)
 (crosslinker; highly corrosion-resistant compns. for coating
 non-chromated steel surface without interfering welding
 ability and their formation)
- IT 7664-38-2, Phosphoric acid, uses 12921-95-3
 16961-83-4, Hexafluorosilicic acid 17439-11-1,
 Hexafluorotitanic acid
 RL: CAT (Catalyst use); USES (Uses)
 (highly corrosion-resistant compns. for coating non-chromated
 steel surface without interfering welding ability and their
 formation)
- IT 67-51-6DP, 3,5-Dimethylpyrazole, reaction products with epoxy resins
 25068-38-6DP, Epikote 828, reaction products with pyrazole 25068-38-6P,
 Epikote 828 507271-32-1P, Bisphenol A-epichlorohydrin-Duranate
 MFK60X-polyethylene glycol-TDI copolymer 869804-46-6P,
 3-Amino-1,2,4-triazole-bisphenol A-epichlorohydrin-Duranate MF-K
 60X-polyethylene glycol-TDI copolymer 869804-47-7P,
 3-Amino-1,2,4-triazole-Epikote 1256 copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (highly corrosion-resistant compns. for coating non-chromated
 steel surface without interfering welding ability and their
 formation)
- IT 214832-30-1, Epikote 1256
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
 engineered material use); USES (Uses)
 (highly corrosion-resistant compns. for coating non-chromated
 steel surface without interfering welding ability and their
 formation)
- IT 12597-69-2, Steel, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (plated substrate; highly corrosion-resistant compns. for coating
 non-chromated steel surface without interfering welding
 ability and their formation)
- IT 111-90-0, Diethylene glycol monoethyl ether
 RL: MOA (Modifier or additive use); USES (Uses)
 (temporary blocking agent; highly corrosion-resistant compns. for
 coating non-chromated steel surface without interfering
 welding ability and their formation)
- IT 7631-86-9, Silica, uses 29196-72-3, Aluminum
 tripolyphosphate 130638-76-5, Aluminum phosphomolybdate
 RL: MOA (Modifier or additive use); USES (Uses)
 (corrosion inhibitor; highly corrosion-resistant compns. for coating
 non-chromated steel surface without interfering welding
 ability and their formation)
- RN 7631-86-9 HCAPLUS
 CN Silica (CA INDEX NAME)



RN 29196-72-3 HCAPLUS
 CN Triphosphoric acid, aluminum salt (1:?) (CA INDEX NAME)



●x Al

RN 130638-76-5 HCPLUS

CN Aluminum molybdenum hydroxide oxide phosphate (CA INDEX NAME)

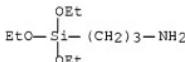
Component	Ratio	Component Registry Number
O	x	17778-80-2
HO	x	14280-30-9
O4P	x	14265-44-2
Mo	x	7439-98-7
Al	x	7429-90-5

IT 919-30-2, KBE 903 1760-24-3, KBM 603 2530-83-8
 , KBM 403 2602-34-8, KBE 403 2897-60-1, KBM 402
 3069-29-2, KBM 602

RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agent; highly corrosion-resistant compns. for coating
 non-chromated steel surface without interfering welding
 ability and their formation)

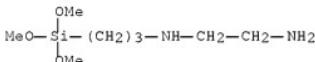
RN 919-30-2 HCPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (CA INDEX NAME)



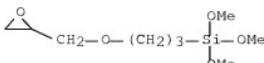
RN 1760-24-3 HCPLUS

CN 1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]- (CA INDEX NAME)

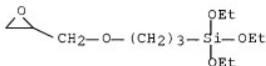


RN 2530-83-8 HCPLUS

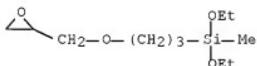
CN Oxirane, 2-[(3-(trimethoxysilyl)propoxy)methyl]- (CA INDEX NAME)



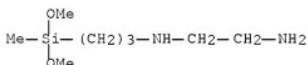
RN 2602-34-8 HCAPLUS
 CN Oxirane, 2-[{3-(triethoxysilyl)propoxy]methyl}- (CA INDEX NAME)



RN 2897-60-1 HCAPLUS
 CN Oxirane, 2-[{3-(diethoxymethylsilyl)propoxy]methyl}- (CA INDEX NAME)



RN 3069-29-2 HCAPLUS
 CN 1,2-Ethanediamine, N1-[3-(dimethoxymethylsilyl)propyl]- (CA INDEX NAME)



IT 7664-38-2, Phosphoric acid, uses 12021-95-3
 16961-83-4, Hexafluorosilicic acid 17439-11-1,
 Hexafluorotitanic acid

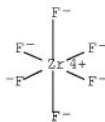
RL: CAT (Catalyst use); USES (Uses)

(highly corrosion-resistant compns. for coating non-chromated
 steel surface without interfering welding ability and their
 formation)

RN 7664-38-2 HCAPLUS
 CN Phosphoric acid (CA INDEX NAME)

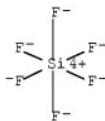


RN 12021-95-3 HCAPLUS
 CN Zirconate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



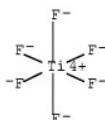
●2 H⁺

RN 16961-83-4 HCAPLUS
 CN Silicate(2-), hexafluoro-, hydrogen (1:2) (CA INDEX NAME)



●2 H⁺

RN 17439-11-1 HCAPLUS
 CN Titanate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



●2 H⁺

IT 507271-32-1P, Bisphenol A-epichlorohydrin-Duranate
 MFK60X-polyethylene glycol-TDI copolymer 869804-46-6P,
 3-Amino-1,2,4-triazole-bisphenol A-epichlorohydrin-Duranate MF-K
 60X-polyethylene glycol-TDI copolymer 869804-47-7P,
 3-Amino-1,2,4-triazole-Epikote 1256 copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (highly corrosion-resistant compns. for coating non-chromated
 steel surface without interfering welding ability and their
 formation)
 RN 507271-32-1 HCAPLUS
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane,
 1,3-diisocyanatomethylbenzene, Duranate MF-K 60X and α -hydro- ω -

hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

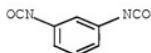
CM 1

CRN 199876-59-0
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

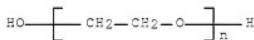
CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



D1-Me

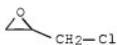
CM 3

CRN 25322-68-3
 CMF (C2 H4 O)n H2 O
 CCI PMS



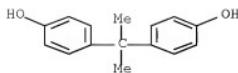
CM 4

CRN 106-89-8
 CMF C3 H5 Cl O



CM 5

CRN 80-05-7
 CMF C15 H16 O2



RN 869804-46-6 HCAPLUS
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene, Duranate MF-K 60X,
 α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) and
 1H-1,2,4-triazol-3-amine (CA INDEX NAME)

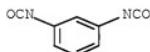
CM 1

CRN 199876-59-0
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

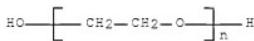
CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



D1-Me

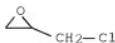
CM 3

CRN 25322-68-3
 CMF (C2 H4 O)n H2 O
 CCI PMS

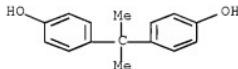


CM 4

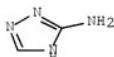
CRN 106-89-8
 CMF C3 H5 Cl O



CM 5

CRN 80-05-7
CMF C15 H16 O2

CM 6

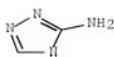
CRN 61-82-5
CMF C2 H4 N4RN 869804-47-7 HCPLUS
CN 1H-1,2,4-Triazol-3-amine, polymer with Epikote 1256 (CA INDEX NAME)

CM 1

CRN 214832-30-1
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 61-82-5
CMF C2 H4 N4

IT 12597-69-2, Steel, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(plated substrate; highly corrosion-resistant compns. for coating

non-chromated steel surface without interfering welding ability and their formation)

RN 12597-69-2 HCPLUS
CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L74 ANSWER 2 OF 15 HCPLUS COPYRIGHT 2007 ACS on STN
AN 2004:1127448 HCPLUS Full-text

DN 142:58372

TI Highly corrosion-resistant surface-treated steel sheet and method for producing same

IN Miyoshi, Tatsuya; Sasaki, Kenichi; Yoshimi,
Nacto; Matsuzaki, Akira; Okai, Kazuhisa;
Ooshima, Takao; Nakano, Takashi; Murata,
Masahiro; Tanaka, Syoichi

PA JFE Steel Corporation, Japan; Kansai Paint Co., Ltd.

SO PCT Int. Appl., 122 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2004111141	A1	20041223	WO 2004-JP8650	20040614 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 200602167	A	20060105	JP 2004-173337	20040611 <--
EP 1634932	A1	20060315	EP 2004-736805	20040614 <--
R: DE, FR, GB				
CN 1836016	A	20060920	CN 2004-80023517	20040614 <--
US 2006141230	A1	20060629	US 2005-559641	20051202 <--
PRAI JP 2003-171344	A	20030616 <--		
JP 2004-146334	A	20040517 <--		
WO 2004-JP8650	W	20040614 <--		
AB A surface-treated steel sheet is disclosed which comprises a zinc-plated steel sheet, a surface treatment film formed on the surface of the zinc-plated steel sheet by applying a surface treatment composition to the steel sheet and drying it, and an upper coating film formed over the surface treatment film by applying a coating composition for the upper coating film over the surface treatment film and drying it. The surface treatment composition contains an aqueous epoxy resin dispersion, a silane coupling agent, and a phosphoric acid and/or a fluorometallic acid. The coating composition for the upper coating film contains a high mol. weight, epoxy group-containing resin having a number-average mol. weight of 6000-20,000.				
IC C09D0163-00				
ICS C09D0175-00; C23C0028-04				
CC 42-10 (Coatings, Inks, and Related Products)				
Section cross-reference(s): 55				
ST zinc plated steel sheet anticorrosive coating epoxy resin dispersion; silane coupling agent epoxy dispersion coating steel				

- sheet; phosphoric acid epoxy dispersion anticorrosive coating
steel sheet; fluorometallic acid epoxy dispersion anticorrosive
coating steel sheet
- IT Coating materials
(anticorrosive; coatings for manufacture of highly corrosion-resistant
surface-treated steel sheets)
- IT Coupling agents
(coatings for manufacture of highly corrosion-resistant surface-treated
steel sheets)
- IT Polyurethanes, uses
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
engineered material use); USES (Uses)
(coatings for manufacture of highly corrosion-resistant surface-treated
steel sheets)
- IT Polyoxyalkylenes, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(epoxy; coatings for manufacture of highly corrosion-resistant
surface-treated steel sheets)
- IT Epoxy resins, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(polyoxyalkylene; coatings for manufacture of highly corrosion-resistant
surface-treated steel sheets)
- IT Silanes
RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or
reagent); USES (Uses)
(silanes; coatings for manufacture of highly corrosion-resistant
surface-treated steel sheets)
- IT Galvanized steel
RL: MSC (Miscellaneous)
(substrate; coatings for manufacture of highly corrosion-resistant
surface-treated steel sheets)
- IT 36830-06-7P, Bisphenol A-diethanolamine-epichlorohydrin copolymer
85623-89-6P, Bisphenol A-epichlorohydrin-formaldehyde-melamine
copolymer 134291-65-9P, Bisphenol A-epichlorohydrin-Takenate B
870N copolymer 184015-80-3P 247223-93-4P
507271-32-1P, Bisphenol A-Duranate MFK60X-epichlorohydrin-
polyethylene glycol-TDI copolymer 811448-86-9P 811448-87-0P
811448-88-1P 811448-89-2P, Epikote 1256-formaldehyde-melamine
copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(coatings for manufacture of highly corrosion-resistant surface-treated
steel sheets)
- IT 7664-38-2, Phosphoric acid, uses 12821-95-3
16961-83-4, Hexafluorosilicic acid 17439-11-1,
Hexafluorotitanic acid
RL: MOA (Modifier or additive use); USES (Uses)
(coatings for manufacture of highly corrosion-resistant surface-treated
steel sheets)
- IT 168679-90-1, Permarin UC 20 190606-09-8, Takelac W 635 392315-60-5,
Superflex 600 443919-87-7, Superflex E 2500 740843-34-9, Ucoat UX 2505
745031-19-0, Adeka Bon-Tighter UX 206
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or
engineered material use); USES (Uses)
(coatings for manufacture of highly corrosion-resistant surface-treated

steel sheets)

IT 319-30-2, KBE 903 1760-24-3, KBM 603 2530-83-6
 , KBM 403 2602-34-8, KBE 403 2827-60-1, KBE 402
 3069-29-2, KBM 602 5089-72-5, KBE 603 13822-56-5
 , KBM 903

RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (coupler; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)

IT 11149-64-1 12609-49-3 52360-06-2
 58465-32-0 112964-43-9 142240-64-0
 208469-25-4

RL: MSC (Miscellaneous)
 (plating on steel; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)

IT 12597-69-2, Steel, miscellaneous

RL: MSC (Miscellaneous)
 (substrate, Zn alloy-plated; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)

IT 38830-06-7P, Bisphenol A-diethanolamine-epichlorohydrin copolymer
 85023-89-EP, Bisphenol A;epichlorohydrin;formaldehyde;melamine copolymer 134291-65-9P, Bisphenol A-epichlorohydrin-Takenate B
 870N copolymer 184015-80-3P 247223-93-4P
 507271-32-1P, Bisphenol A-Duranate MFK60X-epichlorohydrin-polyethylene glycol-TDI copolymer 811449-87-0P
 811448-99-2P, Epikote 1256-formaldehyde-melamine copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)

RN 38830-06-7 HCAPLUS

CN Phenol, 4, 4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and 2,2'-iminobis[ethanol] (CA INDEX NAME)

CM 1

CRN 111-42-2

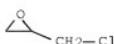
CMF C4 H11 N O2



CM 2

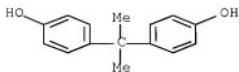
CRN 106-89-8

CMF C3 H5 Cl O



CM 3

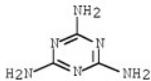
CRN 80-05-7
 CMF C15 H16 O2



RN 85023-89-8 HCAPLUS
 CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

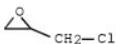
CM 1

CRN 108-78-1
 CMF C3 H6 N6



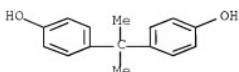
CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7
 CMF C15 H16 O2



CM 4

CRN 50-00-0
 CMF C H2 O

H₂C=O

RN 134291-65-9 HCPLUS
 CN Phenol, 4,4'-(1-methylethyldene)bis-, polymer with 2-(chloromethyl)oxirane and Takenate B 870N (CA INDEX NAME)

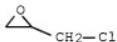
CM 1

CRN 124671-40-5
 CMF Unspecified
 CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

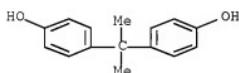
CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7
 CMF C15 H16 O2



RN 184015-80-3 HCPLUS
 CN Phenol, 4,4'-(1-methylethyldene)bis-, polymer with 2-(chloromethyl)oxirane and Duranate MF-B 80M (CA INDEX NAME)

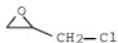
CM 1

CRN 174514-92-2
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

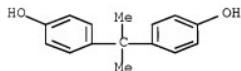
CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7
 CMF C15 H16 O2

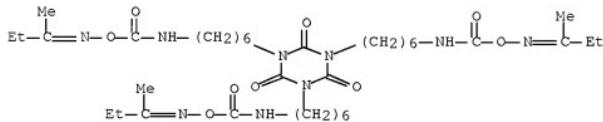


RN 247223-93-4 HCAPLUS

CRN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[6-[[[[1-methylpropylidene)amino]oxy]carbonyl]amino]hexyl-, polymer with 2-(chloromethyl)oxirane and 4,4'-(1-methylethylidene)bis[phenol] (CA INDEX NAME)

CM 1

CRN 93919-05-2
 CMF C36 H63 N9 O9

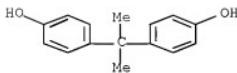


CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7
CMF C15 H16 O2

RN 507271-32-1 HCPLUS

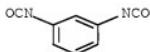
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane,
1,3-diisocyanatomethylbenzene, Duranate MF-K 60X and α -hydro- ω -
hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 199876-59-0
CMF Unspecified
CCI PMS, MAN

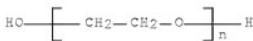
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS

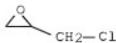
D1-Me

CM 3

CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS

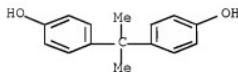
CM 4

CRN 106-89-8
CMF C3 H5 Cl O



CM 5

CRN 80-05-7
CMF C15 H16 O2



RN 811448-87-0 HCAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[6-[[[[1-methylpropylidene)amino]oxy]carbonyl]amino]hexyl-, polymer with Epikote 1256 (CA INDEX NAME)

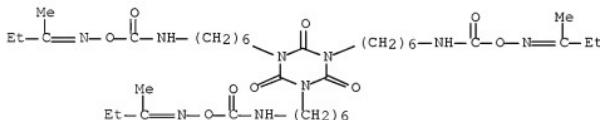
CM 1

CRN 214832-30-1
CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 93919-05-2
CMF C36 H63 N9 O9



RN 811448-89-2 HCAPLUS

CN Formaldehyde, polymer with Epikote 1256 and 1,3,5-triazine-2,4,6-triamine (9CI) (CA INDEX NAME)

CM 1

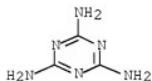
CRN 214832-30-1

CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 108-78-1
CMF C3 H6 N6



CM 3

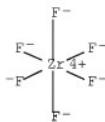
CRN 50-00-0
CMF C H₂ O

H₂C=O

IT 7664-38-2, Phosphoric acid, uses 12021-95-3
16961-93-4, Hexafluorosilicic acid 17439-11-1,
Hexafluorotitanic acid
RL: MOA (Modifier or additive use); USES (Uses)
(coatings for manufacture of highly corrosion-resistant surface-treated
steel sheets)
RN 7664-38-2 HCPLUS
CN Phosphoric acid (CA INDEX NAME)

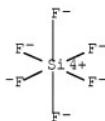


RN 12021-95-3 HCPLUS
CN Zirconate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



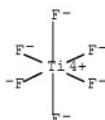
●2 H⁺

RN 16961-83-4 HCAPLUS
 CN Silicate(2-), hexafluoro-, hydrogen (1:2) (CA INDEX NAME)



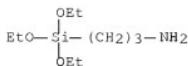
●2 H⁺

RN 17439-11-1 HCAPLUS
 CN Titanate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)

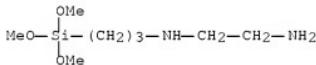


●2 H⁺

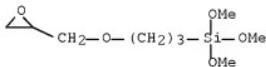
IT 919-30-2, KBE 903 1760-24-3, KBM 603 2530-83-8
 , KBM 403 3602-34-8, KBE 403 2897-60-1, KBE 402
 3069-29-2, KBM 602 5089-72-5, KBE 603 13822-56-5
 , KBM 903
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or
 reagent); USES (Uses)
 (coupler; coatings for manufacture of highly corrosion-resistant
 surface-treated steel sheets)
 RN 919-30-2 HCAPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)- (CA INDEX NAME)



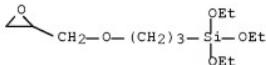
RN 1760-24-3 HCAPLUS
 CN 1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]- (CA INDEX NAME)



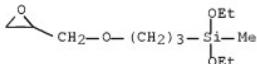
RN 2530-83-8 HCAPLUS
 CN Oxirane, 2-[1[3-(trimethoxysilyl)propoxymethyl]- (CA INDEX NAME)



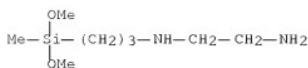
RN 2602-34-8 HCAPLUS
 CN Oxirane, 2-[1[3-(triethoxysilyl)propoxymethyl]- (CA INDEX NAME)



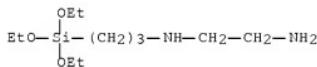
RN 2897-60-1 HCAPLUS
 CN Oxirane, 2-[1[3-(diethoxymethylsilyl)propoxymethyl]- (CA INDEX NAME)



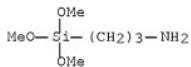
RN 3069-29-2 HCAPLUS
 CN 1,2-Ethanediamine, N1-[3-(dimethoxymethylsilyl)propyl]- (CA INDEX NAME)



RN 5089-72-5 HCPLUS
 CN 1,2-Ethanediamine, N1-[3-(triethoxysilyl)propyl]- (CA INDEX NAME)



RN 13822-56-5 HCPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)- (CA INDEX NAME)



IT 11149-84-1 12609-49-3 52360-06-2
 58465-32-0 112964-43-9 142240-64-0
 208469-25-4

RL: MSC (Miscellaneous)
 (plating on steel; coatings for manufacture of highly
 corrosion-resistant surface-treated steel sheets)

RN 11149-84-1 HCPLUS
 CN Aluminum alloy, nonbase, Al,Zn (CA INDEX NAME)

Component	Component
	Registry Number
Al	7429-90-5
Zn	7440-66-6

RN 12609-49-3 HCPLUS
 CN Aluminum alloy, base, Al 94,Si 6 (CA INDEX NAME)

Component	Component	Component
Percent		Registry Number
Al	94	7429-90-5
Si	6	7440-21-3

RN 52360-06-2 HCPLUS
 CN Zinc alloy, base, Zn 88,Ni 12 (CA INDEX NAME)

Component	Component	Component
Percent		Registry Number

10/559641

Zn	88	7440-66-6
Ni	12	7440-02-0

RN 58465-32-0 HCPLUS
CN Zinc alloy, base, Zn 90,Fe 10 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	90	7440-66-6
Fe	10	7439-89-6

RN 112964-43-9 HCPLUS
CN Zinc alloy, base, Zn 100,Mg 0.5 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	100	7440-66-6
Mg	0.5	7439-95-4

RN 142240-64-0 HCPLUS
CN Zinc alloy, base, Zn 94,Al 5,Mg 0.5 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	94	7440-66-6
Al	5	7429-90-5
Mg	0.5	7439-95-4

RN 208469-25-4 HCPLUS
CN Zinc alloy, base, Zn 91,Al 6,Mg 3 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	91	7440-66-6
Al	6	7429-90-5
Mg	3	7439-95-4

IT 12597-69-2, Steel, miscellaneous

RL: MSC (Miscellaneous)

(substrate, Zn alloy-plated; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RETABLE

Referenced Author (RAU)	Year VOL PG	Referenced Work (RWP)	Referenced File
Kansai Paint Co Ltd	2001	JP 2001239517 A	HCPLUS
Kansai Paint Co Ltd	2003	JP 200334713 A	
Nkk Corp	2001	JP 2001335965 A	HCPLUS
Nkk Corp	2002	EP 129453 A1	
Nkk Corp	2002	WO 200192602 A1	
Nkk Corp	2002	JP 200253979 A	

L74 ANSWER 3 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 2004:474664 HCAPLUS Full-text

DN 141:25130

TI Environmentally friendly corrosion-resistant precoated steel sheet and its manufacture

IN Miyoshi, Tatsuya; Matsuzaki, Akira; Sasaki, Kenichi; Okai, Kazubisa; Sakamoto, Takuya; Yoshimi, Naoto; Yamashita, Masaaki; Murata, Masahiro

PA JFE Steel Corp., Japan; Kansai Paint Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 63 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004162097	A	20040610	JP 2002-327420	20021111 <-
PRAI JP 2002-327420		20021111	<-	

AB The Cr-free precoated sheet for automobiles, household elec. appliances, buildings, etc., has (1) a galvanized or Al-coated steel substrate, (2) a 0.01-1.0 μm -thick precoating film obtained by applying a composition containing (a) aqueous epoxy resin dispersions obtained by reacting polyalkylene glycol-modified epoxy resins [prepared by reacting polyalkylene glycols having number-average mol. weight 400-20,000 with bisphenol epoxy resins, active H-containing compds., and polyisocyanates] with other epoxy resins, active H-containing hydrazine derivs., and optionally other active H-containing compds. and dispersing the resulting resins in water 100 (as solid), (b) silane coupling agents 1-300, and (c) H3PO4 and/or hexafluorometallic acids 0.1-80 parts and drying, and (3) a 0.5-2.0 μm -thick upper coating film containing reaction products of film-forming organic resins with active H-containing compds. including active H-containing hydrazine derivs. Optionally, the substrate surface has a P-, Zn- and/or Al-, and O-containing amorphous compound layer under the precoating film. In manufacture of the precoated sheet, the precoating composition and the upper coating composition applied are dried at 30-150°, resp. Thus, EP 1004 (epoxy resin) was reacted with polyethylene glycol-TDI-Epikote 834X90 (epoxy resin) copolymer blocked with diethylene glycol Et ether in propylene glycol monomethyl ether and 3-amino-1,2,4-triazole, mixed with propylene glycol monobutyl ether, MF-K60X (isocyanate crosslinker), and a catalyst to give an aqueous epoxy resin dispersion, which was mixed with KBE 903 (γ -aminopropyltriethoxysilane) and H3PO4 and applied on an electrogalvanized steel sheet. Then, a topcoat composition containing a reaction product of EP 828 (epoxy resin), bisphenol A, 3,5-dimethylpyrazole, and dibutylamine, Takenate B 870N (blocked IPDI crosslinker), a catalyst, and a Ca ion-exchanged silica corrosion inhibitor was applied on the primed sheet to give a test piece showing high corrosion resistance and weldability.

IC ICM C23C0028-00

ICS B32B0015-08; C23C0022-00; C23C0022-07; C23C0022-18; C23C0022-20; C23C0022-34

CC 42-9 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55

ST galvanized steel epoxy resin primer topcoat anticorrosive; aluminum coated steel epoxy resin primer topcoat anticorrosive; corrosion resistance modified epoxy resin coating steel sheet; polyalkylene glycol modified epoxy resin primer steel; epoxy resin hydrazine deriv primer steel; silane coupling agent epoxy resin primer steel; phosphoric acid epoxy resin primer steel; hexafluorometallic acid epoxy resin primer steel; resin active hydrogen hydrazine deriv product topcoat steel

- IT Amorphous materials
 - (P-, Zn- and/or Al-, and O-containing, on substrate; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Coating materials
 - (anticorrosive; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Silanes
 - RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 - (coupling agent in primer; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Aminoplasts
 - RL: MOA (Modifier or additive use); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 - (crosslinker in topcoat; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Galvanized steel
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (electrogalvanized, substrate; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Polyurethanes, uses
 - RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 - (epoxy-polyoxyalkylene-, primer; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Polyoxyalkylenes, uses
 - RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 - (epoxy-polyurethane-, primer; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Galvanized steel
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (hot-dip, substrate; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Fluoropolymers, uses
 - RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 - (lubricant, topcoat containing; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Corrosion inhibitors
 - (manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Epoxy resins, uses
 - RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 - (polyoxyalkylene-polyurethane-, primer; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Coupling agents
 - (silanes, primer containing; manufacture of Cr-free corrosion-resistant primary

- and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Lubricants
 (solid, topcoat containing; manufacture of Cr-free corrosion-resistant primary
 and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT Phosphates, uses
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (water-soluble, primer containing; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 9002-88-4
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (Ceridust 3620, Luvax 1151, lubricant, topcoat containing; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 12609-49-3 52308-11-9 52360-06-2
 58465-32-0 112964-43-9 142240-64-0
 208469-25-4
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coating on steel; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 7631-86-9, Fumed silica, uses
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (colloidal, corrosion inhibitor in coatings; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 97-77-8, Tetraethylthiuram disulfide 7440-70-2D, Calcium, silica ion-exchanged with, uses 7631-86-9D, Silica, calcium ion-exchanged, uses 13939-25-8, Aluminum dihydrogentriphosphate 130638-76-5, Aluminum phosphomolybdate
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (corrosion inhibitor in coatings; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 919-30-2, KBE 903 1760-24-3, KBM 603 2530-83-8
 , KBM 403 2602-34-8, KBE 403 2897-60-1, KBE 402 3069-29-2, KBM 602 5089-72-5, KBE 603 13822-56-5
 , KBM 903
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (coupling agent in primer; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 822-06-0, HMDI 4098-71-9, IPDI 9003-08-1, Cymel 325 93919-05-2,
 Desmodur BL 3175 124365-39-5, Takenate B 870 174514-92-2, Duranate MF B80M
 RL: MOA (Modifier or additive use); RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)
 (crosslinker in topcoat; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)

- IT 9002-84-0, MP 1100
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (lubricant, topcoat containing; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 12597-69-2, Steel, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 67-51-6DP, 3,5-Dimethylpyrazole, reaction products with epoxy resins and active H-containing compds.
 80-05-7DP, Bisphenol A, reaction products with epoxy resins and active H-containing compds.
 111-92-2DP, Dibutylamine, reaction products with epoxy resins and active H-containing compds.
 3179-31-5DP, 3-Mercapto-1,2,4-triazole, reaction products with epoxy resins and isocyanates
 4098-71-9DP, IPDI, reaction products with epoxy resins and mercaptotriazole
 25068-38-6DP, EP 828, reaction products with active H-containing compds.
 RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent);
 USES (Uses)
 (polyisocyanate- or melamine resin-crosslinked, topcoat; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 61-82-5DP, 3-Amino-1,2,4-triazole, reaction products with epoxy resins
 RL: IMF (Industrial manufacture); RCT (Reactant); TEM (Technical or engineered material use); PREP (Preparation); RACT (Reactant or reagent);
 USES (Uses)
 (polyisocyanate-crosslinked, topcoat; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 7664-38-2, Phosphoric acid, uses 7784-30-7, Aluminum phosphate
 10043-83-1, Magnesium phosphate 10124-54-6, Manganese phosphate
 10381-36-9, Nickel phosphate 12021-95-3
 16961-83-4, Hexafluorosilicic acid 17439-11-1,
 Hexafluorotitanic acid
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses)
 (primer containing; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 700373-18-8P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (primer; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- IT 12609-49-3 52308-11-9 52360-06-2
 58465-32-0 112964-43-9 142240-61-0
 208469-25-4
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coating on steel; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)
- RN 12609-49-3 HCAPLUS
 CN Aluminum alloy, base, Al 94, Si 6 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Al	94	7429-90-5

Si 6 7440-21-3

RN 52308-11-9 HCAPLUS
 CN Aluminum alloy, base, Al 55,Zn 45 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Al	55	7429-90-5
Zn	45	7440-66-6

RN 52360-06-2 HCAPLUS
 CN Zinc alloy, base, Zn 88,Ni 12 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	88	7440-66-6
Ni	12	7440-02-0

RN 58465-32-0 HCAPLUS
 CN Zinc alloy, base, Zn 90,Fe 10 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	90	7440-66-6
Fe	10	7439-89-6

RN 112964-43-9 HCAPLUS
 CN Zinc alloy, base, Zn 100,Mg 0.5 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	100	7440-66-6
Mg	0.5	7439-95-4

RN 142240-64-0 HCAPLUS
 CN Zinc alloy, base, Zn 94,Al 5,Mg 0.5 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	94	7440-66-6
Al	5	7429-90-5
Mg	0.5	7439-95-4

RN 208469-25-4 HCAPLUS
 CN Zinc alloy, base, Zn 91,Al 6,Mg 3 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	91	7440-66-6
Al	6	7429-90-5
Mg	3	7439-95-4

IT 7631-86-9, Fumed silica, uses

RL: MOA (Modifier or additive use); TEM (Technical or engineered material

use); USES (Uses)

(colloidal, corrosion inhibitor in coatings; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)

RN 7631-86-9 HCPLUS

CN Silica (CA INDEX NAME)



IT 7631-86-9D, Silica, calcium ion-exchanged, uses 13939-25-8
, Aluminum dihydrogentriphosphate 130638-76-5, Aluminum
phosphomolybdate
RL: MOA (Modifier or additive use); TEM (Technical or engineered material
use); USES (Uses)
(corrosion inhibitor in coatings; manufacture of Cr-free corrosion-
resistant
primary and secondary resin coating layers on galvanized or Al-coated
steel sheet)

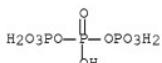
RN 7631-86-9 HCPLUS

CN Silica (CA INDEX NAME)



RN 13939-25-8 HCPLUS

CN Triphosphoric acid, aluminum salt (1:1) (CA INDEX NAME)



● Al

RN 130638-76-5 HCPLUS

CN Aluminum molybdenum hydroxide oxide phosphate (CA INDEX NAME)

Component	Ratio	Component	Registry Number
O	x		17778-80-2
HO	x		14280-30-9
O ₄ P	x		14265-44-2
Mo	x		7439-98-7
Al	x		7429-90-5

IT 919-30-2, KBE 903 1760-24-3, KBM 603 2530-83-8

, KBM 403 2602-34-8, KBE 403 2897-68-1, KBE 402

3669-29-2, KBM 602 5089-72-5, KBE 603 13822-56-5

, KBM 903

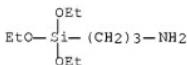
RL: MOA (Modifier or additive use); TEM (Technical or engineered material

use); USES (Uses)

(coupling agent in primer; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)

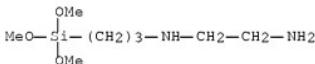
RN 919-30-2 HCAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (CA INDEX NAME)



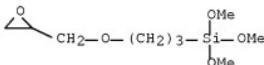
RN 1760-24-3 HCAPLUS

CN 1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]- (CA INDEX NAME)



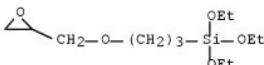
RN 2530-83-8 HCAPLUS

CN Oxirane, 2-[{3-(trimethoxysilyl)propoxy]methyl}- (CA INDEX NAME)



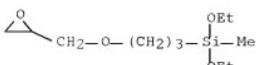
RN 2602-34-8 HCAPLUS

CN Oxirane, 2-[{3-(triethoxysilyl)propoxy]methyl}- (CA INDEX NAME)

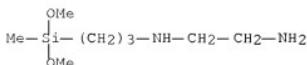


RN 2897-60-1 HCAPLUS

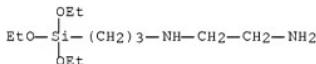
CN Oxirane, 2-[{3-(diethoxymethylsilyl)propoxy]methyl}- (CA INDEX NAME)



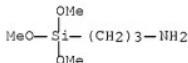
RN 3069-29-2 HCPLUS
 CN 1,2-Ethanediamine, N1-[3-(dimethoxymethylsilyl)propyl]- (CA INDEX NAME)



RN 5089-72-5 HCPLUS
 CN 1,2-Ethanediamine, N1-[3-(triethoxysilyl)propyl]- (CA INDEX NAME)



RN 13822-56-5 HCPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)- (CA INDEX NAME)



IT 12597-69-2, Steel, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (manufacture of Cr-free corrosion-resistant primary and secondary resin
 coating layers on galvanized or Al-coated steel sheet)

RN 12597-69-2 HCPLUS
 CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 IT 7664-38-2, Phosphoric acid, uses 7784-30-7, Aluminum
 phosphate 12021-95-3 16961-83-4, Hexafluorosilicic
 acid 17439-11-1, Hexafluorotitanic acid
 RL: MOA (Modifier or additive use); TEM (Technical or engineered material
 use); USES (Uses)
 (primer containing; manufacture of Cr-free corrosion-resistant primary and
 secondary resin coating layers on galvanized or Al-coated steel
 sheet)
 RN 7664-38-2 HCPLUS
 CN Phosphoric acid (CA INDEX NAME)

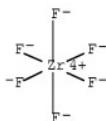


RN 7784-30-7 HCAPLUS
 CN Phosphoric acid, aluminum salt (1:1) (CA INDEX NAME)



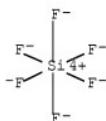
● Al

RN 12021-95-3 HCAPLUS
 CN Zirconate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



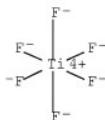
●2 H+

RN 16961-83-4 HCAPLUS
 CN Silicate(2-), hexafluoro-, hydrogen (1:2) (CA INDEX NAME)



●2 H+

RN 17439-11-1 HCAPLUS
 CN Titanate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



●2 H⁺

IT 700373-18-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(primer; manufacture of Cr-free corrosion-resistant primary and secondary resin coating layers on galvanized or Al-coated steel sheet)

RN 700373-18-8 HCPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene, α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl), MFK 60X and 1H-1,2,4-triazol-3-amine (9CI) (CA INDEX NAME)

CM 1

CRN 326588-96-9

CMF Unspecified

CCI PMS, MAN

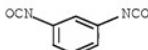
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



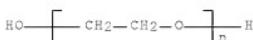
D1-Me

CM 3

CRN 25322-68-3

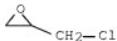
CMF (C2 H4 O)n H2 O

CCI PMS



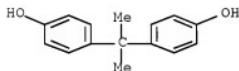
CM 4

CRN 106-89-8
 CMF C3 H5 Cl O



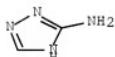
CM 5

CRN 80-05-7
 CMF C15 H16 O2



CM 6

CRN 61-82-5
 CMF C2 H4 N4



L74 ANSWER 4 OF 15 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 2003:582804 HCPLUS Full-text

DN 139:151170

TI Anticorrosive coating of non-chromated metal tube surface and method for pretreatment of the surface

IN Yamamoto, Masato; Kutsuna, Shuichi; Urushima, Hideto; Akui, Jun

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

PAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003213456	A	20030730	JP 2002-13681	20020123 <--
PRAI JP 2002-13681		20020123	<--	
AB In the method, metal tube surface is pretreated prior to covering with resin layers where the pretreatment is derived from a mixture of (A) aqueous solution containing the reaction products of hydrolyzable Ti compound or/and				

its lower condensate or/and Ti hydroxide or/and its lower condensate with H₂O₂, and (B) P compds., FH, metal halides or/and salts, Si halides or/and salts or/and organic acid or/and its salts. Thus, dropping a 1:9 NH₃ water into 500 mL solution made from 5 mL 60% aqueous solution of TiCl₄ and water, washing the resulting precipitated Ti hydroxide with water, and mixing with 10 mL a 30% H₂O₂ solution gave a semi-transparent yellow liquid of 70 mL volume. Dipping a degreased Zn-plated steel plate in a solution containing the liquid 50, 10% orthophosphoric acid 5 and water 45 parts at 30° for 30 s, baking at 160° for 10 min, spray coating the pretreated surface with an epoxy resin, baking and coating with a vinylidene fluoride resin layer gave a finished tube with good salt-spray corrosion test resistance.

- IC ICM C23C0028-00
ICS B05D0007-14; B32B0001-08; C23C0022-07; C23C0022-34; C23C0022-46;
C23C0022-53; F16L0009-14
- CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55
- IT Galvanized steel
RL: TEM (Technical or engineered material use); USES (Uses)
(tubes; hydrolyzable titanium compds. for pretreatment of metal tubes
prior to multilayer anticorrosive coating and method for pretreatment)
- IT 37346-11-5
RL: TEM (Technical or engineered material use); USES (Uses)
(plating on steel for tubes; hydrolyzable titanium compds.
for pretreatment of metal tubes prior to multilayer anticorrosive
coating and method for pretreatment)
- IT 79-14-1, Glycolic acid, uses 7664-38-2, Orthophosphoric acid,
uses 7664-39-3, Hydrofluoric acid, uses 7783-64-4, Zirconium fluoride
10343-62-1, Metaphosphoric acid 51142-88-2, Titanium fluoride
RL: TEM (Technical or engineered material use); USES (Uses)
(pretreatment with titanium compds.; hydrolyzable titanium compds. for
pretreatment of metal tubes prior to multilayer anticorrosive coating
and method for pretreatment)
- IT 85023-89-9, Bisphenol A-epichlorohydrin-formaldehyde-melamine
copolymer
RL: TEM (Technical or engineered material use); USES (Uses)
(surface under coating; hydrolyzable titanium compds. for pretreatment
of metal tubes prior to multilayer anticorrosive coating and method for
pretreatment)
- IT 12597-69-2, Steel, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(tubes; hydrolyzable titanium compds. for pretreatment of metal tubes
prior to multilayer anticorrosive coating and method for pretreatment)
- IT 37346-11-5
RL: TEM (Technical or engineered material use); USES (Uses)
(plating on steel for tubes; hydrolyzable titanium compds.
for pretreatment of metal tubes prior to multilayer anticorrosive
coating and method for pretreatment)
- RN 37346-11-5 HCPLUS
CN Nickel alloy, nonbase, Ni,Zn (CA INDEX NAME)

Component	Component Registry Number
Ni	7440-02-0
Zn	7440-66-6

- IT 7664-38-2, Orthophosphoric acid, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(pretreatment with titanium compds.; hydrolyzable titanium compds. for
pretreatment of metal tubes prior to multilayer anticorrosive coating

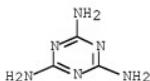
and method for pretreatment)
 RN 7664-38-2 HCPLUS
 CN Phosphoric acid (CA INDEX NAME)



IT 85023-89-8, Bisphenol A-epichlorohydrin-formaldehyde-melamine copolymer
 RL: TEM (Technical or engineered material use); USES (Uses)
 (surface under coating; hydrolyzable titanium compds. for pretreatment of metal tubes prior to multilayer anticorrosive coating and method for pretreatment)
 RN 85023-89-8 HCPLUS
 CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

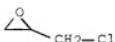
CM 1

CRN 108-78-1
 CMF C3 H6 N6



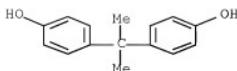
CM 2

CRN 106-89-8
 CMF C3 H5 Cl1 O



CM 3

CRN 80-05-7
 CMF C15 H16 O2



CM 4

CRN 50-00-0
CMF C H2 OH2C=O

IT 12597-69-2, Steel, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(tubes; hydrolyzable titanium compds. for pretreatment of metal tubes
prior to multilayer anticorrosive coating and method for pretreatment)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L74 ANSWER 5 OF 15 HCPLUS COPYRIGHT 2007 ACS on STN
AN 2003:274972 HCPLUS Full-text

DN 138:289090

TI Anticorrosive precoated steel sheets and manufacture thereof

IN Okai, Kazuhisa; Matsuzaki, Akira; Yoshimi,
Naoto; Kubota, Takahiro; Yamashita, Masaaki; Noro, Hisato; Nakamichi,
Jiro; Sato, Kaoru; Matsuki, Hiroyasu; Nishida, Reiji; Murata,
Masahiro

PA NKK Corp., Japan; Kansai Paint Co., Ltd.; JFE Steel Corp.

SO Jpn. Kokai Tokkyo Koho, 36 pp.
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003105554	A	20030409	JP 2002-214579	20020723 <--
	JP 3665046	B2	20050629		
	WO 2004009870	A1	20040129	WO 2003-JP1531	20030214 <--
	W: CN, KR, US RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR				
	EP 1524332	A1	20050420	EP 2003-705145	20030214 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, CY, TR, BG, CZ, EE, HU, SK				
	CN 1671885	A	20050921	CN 2003-817687	20030214 <--
	TW 259216	B	20060801	TW 2003-92103114	20030214 <--
	US 2005147832	A1	20050707	US 2005-515303	20050124 <--
	JP 2005206947	A	20050804	JP 2005-29983	20050207 <--
PRAI	JP 2001-220912	A	20010723	<--	
	JP 2002-214579	A	20020723	<--	
	WO 2003-JP1531	W	20030214	<--	

- AB Chromium-free coating compns. containing (a) water-dispersible and/or water-soluble resins which are reaction products of epoxy-containing resins and active H-containing compds. comprising hydrazine derivs., (b) silane coupling agents, and (c) H₃PO₄ and/or hexafluorometal acids (e.g., H₂SiF₆, H₂TiF₆) are applied on galvanized steel or aluminum-plated steel sheets to give a monolayer anticorrosive coating having a thickness of 0.02-5 µm.
- IC ICM C23C0022-36
ICS C23C0022-00; C23C0022-42; C23C0028-00
- CC 42-9 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55
- ST hydrazine epoxy resin reaction product anticorrosive coating steel sheet; silane coupling agent anticorrosive coating steel; hexafluoro metal acid anticorrosive coating steel
- IT Coating materials
(anticorrosive, water-thinned; chromium-free anticorrosive coatings for plated steel sheets)
- IT Corrosion inhibitors
(chromium-free anticorrosive coatings for plated steel sheets)
- IT Galvanized steel
RL: MSC (Miscellaneous)
(chromium-free anticorrosive coatings for plated steel sheets)
- IT Polyurethanes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(epoxy-polyoxalkylene-, reaction products with hydrazine derivs.; chromium-free anticorrosive coatings for plated steel sheets)
- IT Polyoxyalkylenes, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(epoxy-polyurethane-, reaction products with hydrazine derivs.; chromium-free anticorrosive coatings for plated steel sheets)
- IT Epoxy resins, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(polyoxyalkylene-polyurethane-, reaction products with hydrazine derivs.; chromium-free anticorrosive coatings for plated steel sheets)
- IT Epoxy resins, uses
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(reaction products, with hydrazine derivs.; chromium-free anticorrosive coatings for plated steel sheets)
- IT Coupling agents
(silane; chromium-free anticorrosive coatings for plated steel sheets)
- IT 12597-69-2, Steel, miscellaneous
RL: MSC (Miscellaneous)
(aluminum-plated; chromium-free anticorrosive coatings for plated steel sheets)
- IT 61-82-5DP, 3-Amino-1,2,4-triazole, reaction products with epoxy resins 507271-32-1DP, Epikote 834X90-Duranate MF-K 60X-polyethylene glycol-TDI copolymer, reaction products with 3-amino-1,2,4-triazole
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chromium-free anticorrosive coatings for plated steel sheets)
- IT 302-01-2D, Hydrazine, derivs., reaction products with epoxy resins 7664-38-2, Phosphoric acid, uses 7794-30-7, Aluminum

phosphate 10043-83-1, Magnesium phosphate 10124-54-6, Manganese phosphate 10381-36-9, Nickel phosphate 12021-95-3
 16961-83-4, Hexafluorosilicic acid 17439-11-1,
 Hexafluorotitanic acid
 RL: TEM (Technical or engineered material use); USES (Uses)
 (chromium-free anticorrosive coatings for plated steel sheets)
 IT 7631-86-9, Fumed silica, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (colloidal, corrosion inhibitor; chromium-free anticorrosive coatings for plated steel sheets)
 IT 97-77-8, Tetraethylthiram disulfide 13939-25-8, Aluminum dihydrogen triphosphate 130636-76-5, Aluminum phosphomolybdate
 RL: TEM (Technical or engineered material use); USES (Uses)
 (corrosion inhibitor; chromium-free anticorrosive coatings for plated steel sheets)
 IT 919-30-2, KBE 903 1760-24-3, KBE 603 2530-83-8
 , KBE 403 2602-34-8, KBE 403 2897-60-1, KBE 402 3069-29-2, KBE 602 5089-72-5, KBE 603 13822-56-5
 , KBE 903
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coupling agents; chromium-free anticorrosive coatings for plated steel sheets)
 IT 12597-69-2, Steel, miscellaneous
 RL: MSC (Miscellaneous)
 (aluminum-plated; chromium-free anticorrosive coatings for plated steel sheets)
 RN 12597-69-2 HCAPLUS
 CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 507271-32-1DP, Epikote 834X90-Duranate MF-K 60X-polyethylene glycol-TDI copolymer, reaction products with 3-amino-1,2,4-triazole
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (chromium-free anticorrosive coatings for plated steel sheets)
 RN 507271-32-1 HCAPLUS
 CN Phenol, 4,4'-(methyleneethylenedene)bis-, polymer with (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene, Duranate MF-K 60X and α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

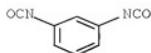
CM 1

CRN 199876-59-0
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

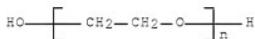
CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



D1-Me

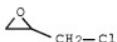
CM 3

CRN 25322-68-3
 CMF (C₂H₄O)_nH₂O
 CCI PMS



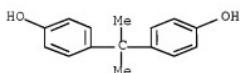
CM 4

CRN 106-89-8
 CMF C₃H₅ClO



CM 5

CRN 80-05-7
 CMF C₁₅H₁₆O₂



IT 7664-38-2, Phosphoric acid, uses 7784-30-7, Aluminum phosphate 12021-95-3 16961-83-4, Hexafluorosilicic acid 17439-11-1, Hexafluorotitanic acid
 RL: TEM (Technical or engineered material use); USES (Uses)
 (chromium-free anticorrosive coatings for plated steel
 sheets)
 RN 7664-38-2 HCPLUS
 CN Phosphoric acid (CA INDEX NAME)

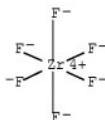


RN 7784-30-7 HCAPLUS
 CN Phosphoric acid, aluminum salt (1:1) (CA INDEX NAME)



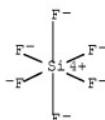
● Al

RN 12021-95-3 HCAPLUS
 CN Zirconate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



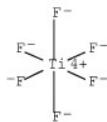
●2 H⁺

RN 16961-83-4 HCAPLUS
 CN Silicate(2-), hexafluoro-, hydrogen (1:2) (CA INDEX NAME)



●2 H⁺

RN 17439-11-1 HCAPLUS
 CN Titanate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



● 2 H⁺

IT 7631-86-9, Fumed silica, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(colloidal, corrosion inhibitor; chromium-free anticorrosive coatings
for plated steel sheets)

RN 7631-86-9 HCAPLUS

CN Silica (CA INDEX NAME)



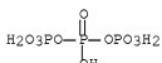
IT 13939-25-8, Aluminum dihydrogen triphosphate 130638-76-5

, Aluminum phosphomolybdate

RL: TEM (Technical or engineered material use); USES (Uses)
(corrosion inhibitor; chromium-free anticorrosive coatings for plated
steel sheets)

RN 13939-25-8 HCAPLUS

CN Triphosphoric acid, aluminum salt (1:1) (CA INDEX NAME)



● Al

RN 130638-76-5 HCAPLUS

CN Aluminum molybdenum hydroxide oxide phosphate (CA INDEX NAME)

Component		Ratio		Component		Registry Number
O		x		17778-80-2		
HO		x		14280-30-9		
O ₄ P		x		14265-44-2		
Mo		x		7439-98-7		
Al		x		7429-90-5		

IT 919-20-2, KBE 903 1760-24-3, KBM 603 2530-83-8

, KBM 403 2602-34-8, KBE 403 2897-69-1, KBE 402

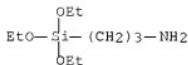
3069-29-2, KBM 602 5089-72-5, KBE 603 13832-56-5

, KBM 903

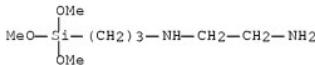
RL: TEM (Technical or engineered material use); USES (Uses)

(coupling agents; chromium-free anticorrosive coatings for plated steel sheets)

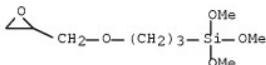
RN 919-30-2 HCPLUS
 CN 1-Propanamine, 3-(triethoxysilyl)- (CA INDEX NAME)



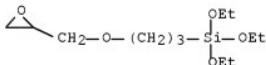
RN 1760-24-3 HCPLUS
 CN 1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]- (CA INDEX NAME)



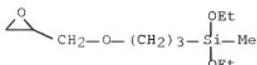
RN 2530-83-8 HCPLUS
 CN Oxirane, 2-[(3-(trimethoxysilyl)propoxy)methyl]- (CA INDEX NAME)



RN 2602-34-8 HCPLUS
 CN Oxirane, 2-[(3-(triethoxysilyl)propoxy)methyl]- (CA INDEX NAME)

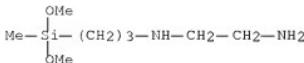


RN 2897-60-1 HCPLUS
 CN Oxirane, 2-[(3-(diethoxymethylsilyl)propoxy)methyl]- (CA INDEX NAME)



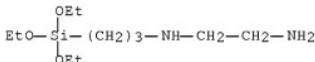
RN 3069-29-2 HCPLUS

CN 1,2-Ethanediamine, N1-[3-(dimethoxymethylsilyl)propyl]- (CA INDEX NAME)



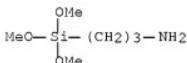
RN 5089-72-5 HCPLUS

CN 1,2-Ethanediamine, N1-[3-(triethoxysilyl)propyl]- (CA INDEX NAME)



RN 13822-56-5 HCPLUS

CN 1-Propanamine, 3-(trimethoxysilyl)- (CA INDEX NAME)



L74 ANSWER 6 OF 15 HCPLUS COPYRIGHT 2007 ACS on STN

AN 2002:595078 HCPLUS Full-text

DN 137:143588

TI Manufacture of surface-treated steel sheet by hot-dip plating
and thermally treating the plated layer

IN Ooi, Toshihiko; Yamaji, Takafumi; Yoshida, Keiji; Tanaka, Yuichiro;
Inagaki, Junichi; Yamashita, Masaaki; Majima, Yasuhiro; Ishida,
Nobuyuki; Fukushima, Yuichi; Inoue, Norio; Hori, Shinji

PA NKK Corp., Japan

SO PCT Int. Appl., 133 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002061164 W: AU, CN, KR, US	A1	20020808	WO 2002-JP690	20020130 <--
JP 2002226960	A	20020814	JP 2001-26182	20010201 <--
JP 3749440	B2	20060301		
JP 2002275645	A	20020925	JP 2001-82423	20010322 <--
JP 3811363	B2	20060816		
JP 2002275646	A	20020925	JP 2001-82445	20010322 <--
JP 3811364	B2	20060816		
JP 2003213395	A	20030730	JP 2002-9960	20020118 <--
JP 3749487	B2	20060301		

JP 2002302750	A	20021018	JP 2002-15889	20020124 <--
JP 3507823	B2	20040315		
JP 2002302777	A	20021018	JP 2002-15908	20020124 <--
JP 3654520	B2	20050602		
AU 2002230097	A1	20020812	AU 2002-230097	20020130 <--
TW 575643	B	20040211	TW 2002-91101646	20020131 <--
US 6610422	B1	20030826	US 2002-255374	20020926 <--
JP 2006207033	A	20060810	JP 2006-118589	20060422 <--
PRAI JP 2001-24861	A	20010131	<--	
JP 2001-24869	A	20010131	<--	
JP 2001-26182	A	20010201	<--	
JP 2001-82423	A	20010322	<--	
JP 2001-82445	A	20010322	<--	
JP 2002-9960	A	20020118	<--	
WO 2002-JP690	W	20020130	<--	
AB	A steel plate is hot-dip plated with Zn-(20-95%) Al, conversion coated, and heat treated to provide the plated layer with a thermal history. The thermal history is provided immediately after the steel plate is taken out of the hot-dip plating bath, or within a temperature range of (130-300°) to 100°.			
IC	ICM C23C0002-28 ICS C23C0022-24			
CC	55-6 (Ferrous Metals and Alloys) Section cross-reference(s): 42			
ST	zinc aluminum plating steel heat treatment thermal history			
IT	Aminoplasts RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (acrylic, top coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)			
IT	Polyesters, preparation RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-, prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)			
IT	Acrylic polymers, uses RL: TEM (Technical or engineered material use); USES (Uses) (aminoplast-, top coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)			
IT	Polyesters, preparation RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-epoxy, prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)			
IT	Epoxy resins, preparation RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (aminoplast-polyester-, prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)			
IT	Phosphates, uses RL: NUU (Other use, unclassified); USES (Uses) (component of conversion coated layer; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)			
IT	Coating process (conversion; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)			
IT	Polyesters, preparation RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM			

- (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (epoxy, prime coating; manufacture of surface-treated steel sheet
 by hot-dip plating and thermally treating the plated layer)
- IT Polyurethanes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (epoxy, prime coating; manufacture of surface-treated steel sheet
 by hot-dip plating and thermally treating the plated layer)
- IT Aminoplasts
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (epoxy-polyester, prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Polyurethanes, preparation
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (epoxy-polyester-, prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Polyesters, preparation
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (epoxy-polyurethane-, prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Coating process
 (hot-dipping; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Chromating
 Heat treatment
 (manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Acrylic polymers, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (optionally crosslinked, component of conversion coated layer or top coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Epoxy resins, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyester-, prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Aminoplasts
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyester-, prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Polyurethanes, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyester-, top coating or component of conversion coated layer; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Epoxy resins, preparation
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyester-polyurethane-, prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)

- IT Epoxy resins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyurethane-, prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Acrylic polymers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (prime coating, Paraloid; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Fluoropolymers, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Polyesters, preparation
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (top coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Epoxy resins, uses
 Polyurethanes, uses
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
 (top coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT Coating materials
 (top or prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT 7439-89-6, Iron, uses 7439-95-4, Magnesium, uses 7439-96-5, Manganese, uses 7440-02-0, Nickel, uses 7440-48-4, Cobalt, uses 7440-70-2, Calcium, uses 7631-86-9, Silica, uses 7664-38-2, Phosphoric acid, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (component of conversion coated layer; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT 12597-69-2, Steel, processes 76917-82-3
 84058-06-0 116434-13-0 439666-14-5
 444996-68-3 444996-70-7 444996-71-8
 444996-72-9 441996-73-0 444996-74-1
 RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT 444996-75-2P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT 444996-69-4P 444996-76-3P 444996-77-4P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT 24937-79-9, Kynar 500 71343-23-2, Epokey 802-30CX 201816-69-5, Epokey 830
 RL: TEM (Technical or engineered material use); USES (Uses)
 (prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)
- IT 40471-09-8P, Adipic acid-ethylene glycol-isophthalic acid-neopentyl glycol-terephthalic acid copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (top coating; manufacture of surface-treated steel sheet by
 hot-dip plating and thermally treating the plated layer)

IT 110670-73-0P 220521-52-8P 444996-78-5P 445041-03-2P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (top coating; manufacture of surface-treated steel sheet by
 hot-dip plating and thermally treating the plated layer)

IT 7631-86-9, Silica, uses 7664-38-2, Phosphoric acid, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (component of conversion coated layer; manufacture of surface-treated
 steel sheet by hot-dip plating and thermally treating the
 plated layer)

RN 7631-86-9 HCPLUS
 CN Silica (CA INDEX NAME)



RN 7664-38-2 HCPLUS
 CN Phosphoric acid (CA INDEX NAME)



IT 10597-69-2, Steel, processes 76917-82-3
 84058-06-0 116434-13-0 439666-14-5
 444996-68-3 444996-70-7 444996-71-8
 444996-72-9 444996-73-0 444996-74-1
 RL: PEP (Physical, engineering or chemical process); PYP (Physical
 process); TEM (Technical or engineered material use); PROC (Process); USES
 (Uses)
 (manufacture of surface-treated steel sheet by hot-dip plating and
 thermally treating the plated layer)

RN 12597-69-2 HCPLUS
 CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 RN 76917-82-3 HCPLUS
 CN Aluminum alloy, base, Al 55,Zn 40,Mg 3,Si 1.5 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	55	7429-90-5
Zn	40	7440-66-6
Mg	3	7439-95-4
Si	1.5	7440-21-3

RN 84058-06-0 HCPLUS
 CN Aluminum alloy, base, Al 55,Zn 44,Si 1.5 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
-----------	----------------------	------------------------------

Al	55	7429-90-5
Zn	44	7440-66-6
Si	1.5	7440-21-3

RN 116434-13-0 HCPLUS

CN Zinc alloy, base, Zn 59, Al 40, Si 1 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
-----------	----------------------	------------------------------

Zn	59	7440-66-6
Al	40	7429-90-5
Si	1	7440-21-3

RN 439666-14-5 HCPLUS

CN Aluminum alloy, base, Al 70, Zn 28, Si 1.8 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
-----------	----------------------	------------------------------

Al	70	7429-90-5
Zn	28	7440-66-6
Si	1.8	7440-21-3

RN 444996-68-3 HCPLUS

CN Aluminum alloy, base, Al 45-65, Zn 23-54, Fe 0-10, Si 0.7-2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
-----------	----------------------	------------------------------

Al	45 - 65	7429-90-5
Zn	23 - 54	7440-66-6
Fe	0 - 10	7439-89-6
Si	0.7 - 2	7440-21-3

RN 444996-70-7 HCPLUS

CN Aluminum alloy, base, Al 55, Zn 42, V 2, Si 1.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
-----------	----------------------	------------------------------

Al	55	7429-90-5
Zn	42	7440-66-6
V	2	7440-62-2
Si	1.5	7440-21-3

RN 444996-71-8 HCPLUS

CN Aluminum alloy, base, Al 55, Zn 42, Mn 2, Si 1.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
-----------	----------------------	------------------------------

Al	55	7429-90-5
Zn	42	7440-66-6
Mn	2	7439-96-5

Si 1.5 7440-21-3

RN 444996-72-9 HCPLUS
 CN Aluminum alloy, base, Al 55,Zn 38,Mg 3,Mn 2,Si 1.5 (9CI) (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Al	55	7429-90-5
Zn	38	7440-66-6
Mg	3	7439-95-4
Mn	2	7439-96-5
Si	1.5	7440-21-3

RN 444996-73-0 HCPLUS
 CN Aluminum alloy, base, Al 55,Zn 36,Mg 3,Mn 2,V 2,Si 1.5 (9CI) (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Al	55	7429-90-5
Zn	36	7440-66-6
Mg	3	7439-95-4
Mn	2	7439-96-5
V	2	7440-62-2
Si	1.5	7440-21-3

RN 444996-74-1 HCPLUS
 CN Aluminum alloy, base, Al 55,Zn 38,Mg 3,V 2,Si 1.5 (9CI) (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Al	55	7429-90-5
Zn	38	7440-66-6
Mg	3	7439-95-4
V	2	7440-62-2
Si	1.5	7440-21-3

IT 444996-77-4P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (prime coating; manufacture of surface-treated steel sheet by hot-dip plating and thermally treating the plated layer)

RN 444996-77-4 HCPLUS
 CN 1,3-Benzenedicarboxylic acid, polymer with 1,4-benzenedicarboxylic acid, Burnock D 550, (chloromethyl)oxirane, 2,2-dimethyl-1,3-propanediol, 1,2-ethanediol, hexanedioic acid and 4,4'-(1-methylethylidene)bis[phenol] (9CI) (CA INDEX NAME)

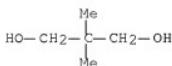
CM 1

CRN 91261-21-1
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 126-30-7
CMF C5 H12 O2



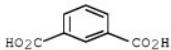
CM 3

CRN 124-04-9
CMF C6 H10 O4



CM 4

CRN 121-91-5
CMF C8 H6 O4



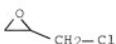
CM 5

CRN 107-21-1
CMF C2 H6 O2

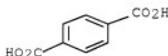


CM 6

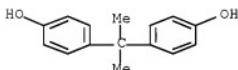
CRN 106-89-8
CMF C3 H5 Cl O



CM 7

CRN 100-21-0
CMF C8 H6 O4

CM 8

CRN 80-05-7
CMF C15 H16 O2

RETABLE

Referenced Work	Author	Year	VOL	PG	Referenced Work	Referenced File
(RAU)	(R PY) (R VL) (R PG)	(R PY)	(R VL)	(R PG)	(R WK)	(File)
Nkk Corp		1999			JP 11343556 A	HCAPLUS
Sumitomo Metal Industri	1997				JP 09111433 A	HCAPLUS

L74 ANSWER 7 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:778537 HCAPLUS Full-text

DN 133:336642

TI Chromium-free metal surface treatment agents and metal sheets coated therewith

IN Kamo, Hiroaki; Hotta, Yasunari

PA Toyobo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000309878	A	20001107	JP 1999-115151	19990422 <--
PRAI JP 1999-115151		19990422	<--	

AB The surface treatment agents comprise (1) Al salts, (2) metal salts other than Al salts, (3) inorg. oxides containing Al and elements other than Al and O, and (4) resins and/or their precursors. Resin-coated metal sheets having the surface treatment layer between metal sheet and resin layer are also claimed. Thus, styrene 16, Me methacrylate 36, glycerin monomethacrylate 20, and methacrylic acid 16 parts were added to H₂O containing 1.5 parts Na styrenesulfonate and K₂S₂O₈ to give an acrylic resin dispersion, which was mixed with Mn(II) phosphate, Al(NO₃)₃, and Al-coated colloidal SiO₂, applied

on a galvanized steel sheet, and dried to form a coating showing excellent adhesion and corrosion resistance.

ICM C23C0022-00
 ICS C09D0005-08; C23F0011-00
 CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55
 ST anticorrosive acrylic coating chromium free steel; aluminum nitrate manganese phosphate anticorrosive steel
 IT Galvanized steel
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (chromium-free anticorrosive coating compns. for metal sheets)
 IT 105030-01-1P 221312-21-6P 303968-20-9P 304466-07-7P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (chromium-free anticorrosive coating compns. for metal sheets)
 IT 7664-38-2, Phosphoric acid, uses 7758-23-8, Calcium dihydrogen phosphate 7794-30-7, Aluminum phosphate 10043-01-3, Aluminum sulfate 13473-90-0 31086-72-3, Phosphoric acid, iron(2+) salt 81686-72-8, Phosphoric acid, manganese(2+) salt 304655-56-9, Snowtex ST-CXS 9
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (chromium-free anticorrosive coating compns. for metal sheets)
 IT 12597-69-2, Steel, uses
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (chromium-free anticorrosive coating compns. for metal sheets)
 IT 7429-90-5, Aluminum, uses
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (colloidal silica coated with; chromium-free anticorrosive coating compns. for metal sheets)
 IT 7631-86-9, Silica, uses
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (colloidal, aluminum-coated; chromium-free anticorrosive coating compns. for metal sheets)
 IT 37346-11-5
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (steel coated with; chromium-free anticorrosive coating compns. for metal sheets)
 IT 303968-20-9P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (chromium-free anticorrosive coating compns. for metal sheets)
 RN 303968-20-9 HCPLUS
 CN 2-Butenedioic acid (2E)-, dibutyl ester, polymer with Epo Toho YD 017, ethenylbenzene, 2,5-furandione, 2-hydroxyethyl 2-propenoate, (1-methylethlenyl)benzene dimer, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and 2-methyl-2-propenoic acid, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 303968-19-6

CMF (C12 H20 O4 . (C9 H10)2 . C8 H8 . C7 H13 N O4 S . C5 H8 O3 . C4 H6 O2
. C4 H2 O3 . Unspecified)x

CCI PMS

CM 3

CRN 70726-46-4

CMF Unspecified

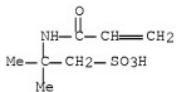
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 15214-89-8

CMF C7 H13 N O4 S



CM 5

CRN 818-61-1

CMF C5 H8 O3



CM 6

CRN 108-31-6

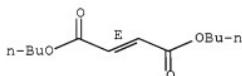
CMF C4 H2 O3



CM 7

CRN 105-75-9
CMF C12 H20 O4

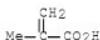
Double bond geometry as shown.



CM 8

CRN 100-42-5
CMF C8 H8

CM 9

CRN 79-41-4
CMF C4 H6 O2

CM 10

CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 11

CRN 98-83-9
CMF C9 H10

IT 7664-38-2, Phosphoric acid, uses 7784-30-7, Aluminum phosphate 10043-01-3, Aluminum sulfate 13473-98-0
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)

(chromium-free anticorrosive coating compns. for metal sheets)
 RN 7664-38-2 HCPLUS
 CN Phosphoric acid (CA INDEX NAME)



RN 7784-30-7 HCPLUS
 CN Phosphoric acid, aluminum salt (1:1) (CA INDEX NAME)



● Al

RN 10043-01-3 HCPLUS
 CN Sulfuric acid, aluminum salt (3:2) (CA INDEX NAME)



● 2/3 Al

RN 13473-90-0 HCPLUS
 CN Nitric acid, aluminum salt (3:1) (CA INDEX NAME)



● 1/3 Al

IT 12597-69-2, Steel, uses
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)
 (chromium-free anticorrosive coating compns. for metal sheets)
 RN 12597-69-2 HCPLUS
 CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 7429-90-5, Aluminum, uses
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (colloidal silica coated with; chromium-free anticorrosive coating
 compns. for metal sheets)
 RN 7429-90-5 HCPLUS
 CN Aluminum (CA INDEX NAME)

A1

IT 7631-86-9, Silica, uses
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (colloidal, aluminum-coated; chromium-free anticorrosive coating
 compns. for metal sheets)
 RN 7631-86-9 HCPLUS
 CN Silica (CA INDEX NAME)

=====

IT 37346-11-5
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)
 (steei coated with; chromium-free anticorrosive coating
 compns. for metal sheets)
 RN 37346-11-5 HCPLUS
 CN Nickel alloy, nonbase, Ni,Zn (CA INDEX NAME)

Component	Component Registry Number
Ni	7440-02-0
Zn	7440-66-6

L74 ANSWER 8 OF 15 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 2000:778536 HCPLUS Full-text
 DN 133:336641
 TI Resin-coated metal sheets with excellent corrosion resistance and
 interlayer adhesion
 IN Kamo, Hiroaki; Hotta, Yasunari
 PA Toyobo Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 18 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000309877	A	20001107	JP 1999-113792	19990421 <--
JP 3901871	B2	20070404		

PRAI JP 1999-113792 19990421 <--

AB Metal sheets having at least a 55- μm layer free from Cr and a resin layer in
 this order are characterized by maximum blister width of the resin layer 55 mm
 when the surface layers are cut into X-shape to reach the metal substrate and

sprayed by salt water according to JIS-Z 2371 for 360 h. Thus, styrene 16, Me methacrylate 36, glycerin monomethacrylate 20, and methacrylic acid 16 parts were added to H₂O containing 1.5 parts Na styrenesulfonate and K2S2O8 to give an acrylic resin dispersion, which was mixed with Al(OAc)₃, Mn phosphate, and colloidal SiO₂, applied on an electrogalvanized steel sheet, and dried to form a coating showing excellent adhesion and corrosion resistance.

- IC ICM C23C0022-00
ICS B05D0005-00; B05D0007-14; B32B0015-08; C23C0022-07; C23C0030-00
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55
ST anticorrosive acrylic coating chromium free steel
IT Galvanized steel
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(chromium-free, resin-coated metal sheets with good corrosion resistance and interlayer adhesion)
IT 105030-01-1P 221312-21-6P 303968-20-9P 304466-07-7P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chromium-free, resin-coated metal sheets with good corrosion resistance and interlayer adhesion)
IT 135-12-8, Aluminum acetate 7446-70-0, Aluminum chloride (AlCl₃), uses 7664-38-2, Phosphoric acid, uses 7757-86-0, Magnesium hydrogen phosphate 7758-23-8, Calcium dihydrogen phosphate 7784-39-7, Aluminum phosphate 10043-01-3, Aluminum sulfate 10103-48-7, Copper phosphate 13473-90-0, Aluminum nitrate 13530-50-2, Aluminum dihydrogen phosphate 22047-20-7, Phosphoric acid, iron(3+) salt 81686-72-8, Phosphoric acid, manganese(2+) salt 304655-56-9, Snowtex ST-CXS 9
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(chromium-free, resin-coated metal sheets with good corrosion resistance and interlayer adhesion)
IT 12597-69-2, Steel, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(chromium-free, resin-coated metal sheets with good corrosion resistance and interlayer adhesion)
IT 7429-90-5, Aluminum, uses
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(colloidal silica coated with; chromium-free, resin-coated metal sheets with good corrosion resistance and interlayer adhesion)
IT 7631-86-9, Silica, uses
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(colloidal; chromium-free, resin-coated metal sheets with good corrosion resistance and interlayer adhesion)
IT 37346-11-5
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(steel coated with; chromium-free, resin-coated metal sheets with good corrosion resistance and interlayer adhesion)
IT 303968-20-9P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chromium-free, resin-coated metal sheets with good corrosion resistance and interlayer adhesion)
RN 303968-20-9 HCAPLUS
CN 2-Butenedioic acid (2E)-, dibutyl ester, polymer with Epo Toho YD 017, ethenylbenzene, 2,5-furandione, 2-hydroxyethyl 2-propenoate,

(1-methylethenyl)benzene dimer, 2-methyl-2-[(1-oxo-2-propenyl)amino]-1-propanesulfonic acid and 2-methyl-2-propenoic acid, compd. with N,N-diethylethanamine (9CI) (CA INDEX NAME)

CM 1

CRN 121-44-8

CMF C6 H15 N



CM 2

CRN 303968-19-6

CMF (C12 H20 O4 . (C9 H10)2 . C8 H8 . C7 H13 N O4 S . C5 H8 O3 . C4 H6 O2 . C4 H2 O3 . Unspecified)x

CCI PMS

CM 3

CRN 70726-46-4

CMF Unspecified

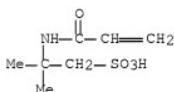
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 4

CRN 15214-89-8

CMF C7 H13 N O4 S



CM 5

CRN 818-61-1

CMF C5 H8 O3



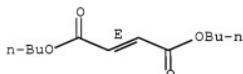
CM 6

CRN 108-31-6
CMF C4 H2 O3



CM 7
CRN 105-75-9
CMF C12 H20 O4

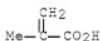
Double bond geometry as shown.



CM 8
CRN 100-42-5
CMF C8 H8



CM 9
CRN 79-41-4
CMF C4 H6 O2



CM 10
CRN 6144-04-3
CMF (C9 H10)2
CCI PMS

CM 11
CRN 98-83-9
CMF C9 H10



IT 139-12-8, Aluminum acetate 7446-70-0, Aluminum chloride (AlCl₃), uses 7664-38-2, Phosphoric acid, uses 7784-30-7, Aluminum phosphate 10043-01-3, Aluminum sulfate 13473-90-0, Aluminum nitrate 13530-50-2, Aluminum dihydrogen phosphate
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (chromium-free, resin-coated metal sheets with good corrosion resistance and interlayer adhesion)
 RN 139-12-8 HCAPLUS
 CN Acetic acid, aluminum salt (3:1) (CA INDEX NAME)



●1/3 Al

RN 7446-70-0 HCAPLUS
 CN Aluminum chloride (AlCl₃) (CA INDEX NAME)



RN 7664-38-2 HCAPLUS
 CN Phosphoric acid (CA INDEX NAME)



RN 7784-30-7 HCAPLUS
 CN Phosphoric acid, aluminum salt (1:1) (CA INDEX NAME)



● Al

RN 10043-01-3 HCPLUS
 CN Sulfuric acid, aluminum salt (3:2) (CA INDEX NAME)



●2/3 Al

RN 13473-90-0 HCPLUS
 CN Nitric acid, aluminum salt (3:1) (CA INDEX NAME)



●1/3 Al

RN 13530-50-2 HCPLUS
 CN Phosphoric acid, aluminum salt (3:1) (CA INDEX NAME)



●1/3 Al

IT 12597-69-2, Steel, uses
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(chromium-free, resin-coated metal sheets with good corrosion resistance and interlayer adhesion)

RN 12597-69-2 HCPLUS
 CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 7429-90-5, Aluminum, uses

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (colloidal silica coated with; chromium-free, resin-coated metal sheets with good corrosion resistance and interlayer adhesion)

RN 7429-90-5 HCPLUS
 CN Aluminum (CA INDEX NAME)

IT 7631-86-9, Silica, uses

RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(colloidal; chromium-free, resin-coated metal sheets with good
corrosion resistance and interlayer adhesion)

RN 7631-86-9 HCPLUS

CN Silica (CA INDEX NAME)



IT 37346-11-5

RL: PRP (Properties); TEM (Technical or engineered material use); USES
(Uses)
(steel coated with; chromium-free, resin-coated metal sheets
with good corrosion resistance and interlayer adhesion)

RN 37346-11-5 HCPLUS

CN Nickel alloy, nonbase, Ni,Zn (CA INDEX NAME)

Component Component
 Registry Number

Component	Component Registry Number
Ni	7440-02-0
Zn	7440-66-6

L74 ANSWER 9 OF 15 HCPLUS COPYRIGHT 2007 ACS on STN

AN 2000:672606 HCPLUS Full-text

DN 133:268323

TI The corrosion-resistant and low poisonous precoat metallic plate

IN Furukawa, Hiroyasu; Takahashi, Akira; Ueda, Kohei; Nomura, Hiromasa;
Kanai, Hiroshi

PA Nippon Steel Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 27 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000262967	A	20000926	JP 1999-75128	19990319 <--
JP 3689252	B2	20050831		
PRAI JP 1999-75128		19990319 <--		

AB The plate is treated with tanning acid/organic resin, then with a coating comprising a polymer from polyester polyol (with ≥3 functional groups), adducts of epoxy resin and lactone or alkylene oxide, and blocked polyisocyanate, and a phosphoric acid ion source and a vanadic acid ion source. Thus, hydrogenated bisphenol A 364.9, adipic acid

441.6, trimethylolpropane 304.1, Placel G402 (*ε*-caprolactone-epoxy adduct) 400 parts were reacted to give a polyol, 1,3- bis(isocyanatomethyl)cyclohexane 241.6 Me Et ketoxime 180.8, polyester polyol 177.0 were reacted to give a blocked isocyanate, and the copolymer of both was coated on an electroplating Zn steel plate with Mn203·V2O5, showing good adhesion and anticorrosion.

IC ICM B05D0007-14

ICS B05D0005-00; B05D0007-24; B32B0015-08; B32B0027-38; B32B0027-40;
C09D0005-08; C09D0007-12; C09D0175-04

CC 42-10 (Coatings, Inks, and Related Products)
 IT 264148-18-7P 281660-41-1P
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (corrosion-resistant and low poisonous precoat metallic plate)
 IT 1305-62-0, Calcium hydroxide, uses 1305-78-8, Calcium oxide, uses
 1310-65-2, Lithium hydroxide 1314-34-7, Vanadium trioxide 1314-62-1,
 Vanadium oxide, uses 7664-38-2, Phosphoric acid, uses
 7757-86-0, Magnesium hydrogen phosphate 7757-87-1 7757-93-9, Calcium
 hydrogen phosphate 7758-23-8, Calcium dihydrogen phosphate 7758-87-4,
 Calcium phosphate 7779-90-0, Zinc phosphate 10343-62-1,
 Metaphosphoric acid 13477-39-9, Calcium metaphosphate 13550-42-0,
 Calcium vanadium oxide (Ca3V2O8) 13573-13-2, Magnesium vanadium oxide
 (MgV2O6) 14100-64-2, Calcium vanadium oxide (CaV2O6) 14986-94-8,
 Manganese vanadium oxide (MnV2O6) 15469-60-0, Vanadium zinc
 oxide (V2Zn3O8) 138882-01-6, Manganese vanadium oxide (MnVO4)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (corrosion-resistant and low poisonous precoat metallic plate)
 IT 264148-18-7P
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)
 (corrosion-resistant and low poisonous precoat metallic plate)
 RN 264148-18-7 HCPLUS
 CN 1,3-Benzenedicarboxylic acid, dimethyl ester, polymer with
 (chloromethyl)oxirane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol,
 1,6-hexanediol, 4,4'-(1-methylethylidene)bis[phenol], 2-oxepanone and
 Takenate D 160N (9CI) (CA INDEX NAME)

CM 1

CRN 120993-98-8

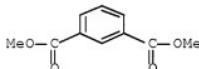
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 1459-93-4

CMF C10 H10 O4



CM 3

CRN 629-11-8

CMF C6 H14 O2

HO—(CH₂)₆—OH

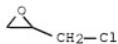
CM 4

CRN 502-44-3
 CMF C6 H10 O2



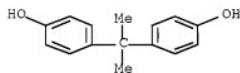
CM 5

CRN 106-89-8
 CMF C3 H5 Cl O



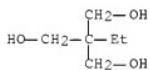
CM 6

CRN 80-05-7
 CMF C15 H16 O2



CM 7

CRN 77-99-6
 CMF C6 H14 O3



IT 7664-38-2, Phosphoric acid, uses 7779-90-0, Zinc phosphate 15469-60-0, Vanadium zinc oxide (V2Zn3O8)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (corrosion-resistant and low poisonous precoat metallic plate)
 RN 7664-38-2 HCPLUS
 CN Phosphoric acid (CA INDEX NAME)



RN 7779-90-0 HCAPLUS
 CN Phosphoric acid, zinc salt (2:3) (CA INDEX NAME)



●3/2 Zn

RN 15469-60-0 HCAPLUS
 CN Vanadium zinc oxide (V2Zn3O8) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	8	17778-80-2
Zn	3	7440-66-6
V	2	7440-62-2

L74 ANSWER 10 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2000:616851 HCAPLUS Full-text

DN 133:224344

TI Anticorrosive steel sheets for fuel tanks

IN Ogata, Hiroyuki; Suzuki, Yukiko; Unno, Shigeru

PA Kawasaki Steel Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 29 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000239854	A	20000905	JP 1999-36563	19990215 <--
PRAI JP 1999-36563		19990215	<--	
AB	Coated steel sheets comprise (a) a steel sheet, (b) Zn plating or Zn-based plating layers on both sides of the sheet, (c) Cr ₆₊ -free chromate layers containing H ₃ PO ₄ and silica on both plating layers, (d) an organic polymer layer containing amine-modified epoxy resin, Al and Ni powders on 1 side of the chromate layer, and (e) an organic polymer layer containing polymers having ≥1 functional group selected from OH, NCO, CO ₂ H, glycidyl, and amino, lubricants, and SiO ₂ on 1 side of the other chromate layer. The steel sheets have good corrosion resistance to gasoline containing alcs. and HCO ₂ H, and show good workability.			
IC	ICM C23C0022-20			
	ICS B32B0015-08; B60K0015-03; B65D0090-04; C23C0022-17; C23C0022-48			

CC 42-9 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55

ST steel sheet anticorrosive coating fuel tank; epoxy resin coating
 anticorrosive steel

IT Fuel tanks
 (anticorrosive coated steel sheets for fuel tanks)

IT Acrylic polymers, uses
 Alkyd resins
 Chromates
 Epoxy resins, uses
 Galvanized steel
 Polyurethanes, uses
 Polyvinyl butyral
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (anticorrosive coated steel sheets for fuel tanks)

IT Coating materials
 (anticorrosive; anticorrosive coated steel sheets for fuel tanks)

IT Galvanized steel
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (electrogalvanized; anticorrosive coated steel sheets for fuel tanks)

IT 7664-38-2, Phosphoric acid, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (anticorrosive coated steel sheets for fuel tanks)

IT 12597-69-2, Steel, uses 38830-06-7, Bisphenol
 A-diethanolamine-epichlorohydrin copolymer 183954-78-1, Bisphenol
 A-dipropanolamine-epichlorohydrin copolymer 291301-88-7, Bisphenol
 A-N-ethylmethanolamine-epichlorohydrin copolymer
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (anticorrosive coated steel sheets for fuel tanks)

IT 11099-06-2, Ethyl silicate
 RL: TEM (Technical or engineered material use); USES (Uses)
 (anticorrosive coated steel sheets for fuel tanks)

IT 9003-01-4, Polyacrylic acid 25300-64-5, Maleic acid-styrene copolymer
 25948-33-8, Acrylic acid-itaconic acid copolymer 29132-58-9, Acrylic
 acid-maleic acid copolymer 78145-90-1, Maleic acid-styrenesulfonic acid
 copolymer
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (chromate layer; anticorrosive coated steel sheets for fuel tanks)

IT 7631-86-9, Snowtex O, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (colloidal; anticorrosive coated steel sheets for fuel tanks)

IT 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (powders; anticorrosive coated steel sheets for fuel tanks)

IT 7664-38-2, Phosphoric acid, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (anticorrosive coated steel sheets for fuel tanks)

RN 7664-38-2 HCAPLUS

CN Phosphoric acid (CA INDEX NAME)



IT 11597-69-3, Steel, uses 38830-06-7, Bisphenol A-diethanolamine-epichlorohydrin copolymer
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (anticorrosive coated steel sheets for fuel tanks)
 RN 12597-69-2 HCPLUS
 CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RN 38830-06-7 HCPLUS
 CN Phenol, 4, 4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and 2,2'-iminobis[ethanol] (CA INDEX NAME)

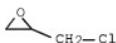
CM 1

CRN 111-42-2
 CMF C4 H11 N O2



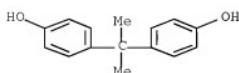
CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7
 CMF C15 H16 O2



IT 7631-66-9, Snowtex O, uses
 RL: MOA (Modifier or additive use); USES (Uses)

(colloidal; anticorrosive coated steel sheets for fuel tanks)
 RN 7631-86-9 HCPLUS
 CN Silica (CA INDEX NAME)

O==Si==O

IT 7429-90-5, Aluminum, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (powders; anticorrosive coated steel sheets for fuel tanks)
 RN 7429-90-5 HCPLUS
 CN Aluminum (CA INDEX NAME)

A1

L74 ANSWER 11 OF 15 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 2000:484249 HCPLUS Full-text
 DN 133:92655
 TI Chromium-free pre-coated steel sheets with excellent corrosion
 resistance
 IN Ueda, Kohei; Nomura, Hiromasa; Kanai, Hiroshi; Furukawa, Hiroyasu; Kabeya,
 Motoo; Shimakura, Toshiaki
 PA Nippon Steel Corp., Japan; Nippon Paint Co., Ltd.
 SO Jpn. Kokai Tokkyo Koho, 21 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000199078	A	20000718	JP 1998-374792	19981228 <--
PRAI JP 1998-374792		19981228 <--		
AB	The pre-coated steels consist of (plated) steel sheets having coatings of a primer layer containing 50-100 weight parts resins and 0.1-10 weight parts V oxide and an anticorrosive layer containing a V-containing ion-generating pigment and a phosphate ion-generating pigment. Optionally the primer layer may also contain thiocarbonyl-containing compds. 0.2-50, phosphoric acid derivs. 0.1-5 (as PO ₄), and/or fine-grain silica 10-500 weight parts. The polymers contained in the anticorrosive layer may be prepared by reaction of (A) polyester polyols having ≥3 functional groups, (B) adducts of lactones or alkylene oxides with epoxy resin having ≥1 secondary OH group(s), and (C) blocked organic polyisocyanate or NCO-terminated blocked prepolymer obtained by reaction of active H compds. and organic polyisocyanates. The steels have excellent over-coatability and corrosion resistance.			
IC	C23C0028-00			
ICS	B05D0007-14; B32B0015-08			
CC	55-6 (Ferrous Metals and Alloys)			
	Section cross-reference(s): 42			
ST	anticorrosive chromium free precoated steel sheet; vanadium oxide anticorrosive coating steel sheet; phosphate anticorrosive coating steel sheet			
IT	Polyolefins			
RL	PRP (Properties); TEM (Technical or engineered material use); USES			

- (Uses)
 (acrylic, primer layer containing; corrosion-resistant pre-coated
 steel sheets having bilayered coatings containing V oxide and
 phosphates)
- IT Epoxy resins, properties
 Polyesters, properties
 Polyurethanes, properties
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)
 (anticorrosive coating containing; corrosion-resistant pre-coated
 steel sheets having bilayered coatings containing V oxide and
 phosphates)
- IT Coating materials
 (anticorrosive; corrosion-resistant pre-coated steel sheets
 having bilayered coatings containing V oxide and phosphates)
- IT Galvanized steel
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)
 (electrogalvanized; corrosion-resistant pre-coated steel
 sheets having bilayered coatings containing V oxide and phosphates)
- IT Polyurethanes, preparation
 Polyurethanes, preparation
 Polyurethanes, preparation
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (epoxy-polyester-; corrosion-resistant pre-coated steel
 sheets having bilayered coatings containing V oxide and phosphates)
- IT Polyesters, preparation
 Polyesters, preparation
 Polyesters, preparation
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (epoxy-polyurethane-; corrosion-resistant pre-coated steel
 sheets having bilayered coatings containing V oxide and phosphates)
- IT Galvanized steel
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)
 (hot-dip; corrosion-resistant pre-coated steel sheets having
 bilayered coatings containing V oxide and phosphates)
- IT Epoxy resins, preparation
 Epoxy resins, preparation
 Epoxy resins, preparation
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (polyester-polyurethane-; corrosion-resistant pre-coated steel
 sheets having bilayered coatings containing V oxide and phosphates)
- IT 177354-79-9P, Manganese phosphorus vanadium oxide 188776-58-1P,
 Magnesium phosphorus vanadium oxide 188776-62-7P, Calcium phosphorus
 vanadium oxide 282107-85-1P
 RL: PNU (Preparation, unclassified); PRP (Properties); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (anticorrosive coating containing; corrosion-resistant pre-coated
 steel sheets having bilayered coatings containing V oxide and
 phosphates)
- IT 1305-78-8, Calcia, properties 7757-86-0, Magnesium monohydrogenphosphate
 7757-87-1 7757-93-9, Calcium monohydrogenphosphate 11099-11-9,
 Vanadium oxide 15469-60-0, Vanadium zinc oxide (V2Zn3O8)
 115493-59-9, Manganese vanadium oxide (Mn3V2O11) 115493-63-5, Manganese
 vanadium oxide (MnV2O7) 138882-01-6, Manganese vanadium oxide (MnVO4)
 RL: PRP (Properties); TEM (Technical or engineered material use); USES

(Uses)

(anticorrosive coating containing; corrosion-resistant pre-coated steel sheets having bilayered coatings containing V oxide and phosphates)

IT 7631-86-9, Silica, properties

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(colloidal, primer layer containing; corrosion-resistant pre-coated steel sheets having bilayered coatings containing V oxide and phosphates)

IT 264148-16-5P, Adipic acid-1,3-bis(isocyanatomethyl)cyclohexane-dimethyl isophthalate-dipropylene glycol-ethyleneglycol-1,6-hexanediol-Placel G-402-trimethylolpropane copolymer 264148-23-4P, Adipic acid-1,3-bis(isocyanatomethyl)cyclohexane-dipropylene glycol-ethyleneglycol-hydrogenated bisphenol A-Placel G-402-trimethylolpropane copolymer 282107-86-2P 282107-87-3P 282107-88-4P 282107-89-5P 282107-90-8P 282107-91-9P 282107-92-0P 282107-93-1P 282107-94-2P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(corrosion-resistant pre-coated steel sheets having bilayered coatings containing V oxide and phosphates)

IT 62-56-6, Thiourea, properties 10124-31-9, Ammonium phosphate

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(primer layer containing; corrosion-resistant pre-coated steel sheets having bilayered coatings containing V oxide and phosphates)

IT 13550-42-0, Calcium vanadium oxide (Ca3V2O8) 13573-13-2, Magnesium vanadium oxide (MgV2O6) 14100-64-2, Calcium vanadium oxide (CaV2O6) 14986-94-8, Manganese vanadium oxide (MnV2O6)

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(sintering with phosphoric acids for anticorrosive layer component preparation; corrosion-resistant pre-coated steel sheets having bilayered coatings containing V oxide and phosphates)

IT 2466-09-3, Pyrophosphoric acid 7664-38-2, Phosphoric acid, properties 7758-87-4, Calcium phosphate 10043-83-1, Magnesium orthophosphate 10343-62-1, Metaphosphoric acid 13477-39-9, Calcium metaphosphate

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(sintering with vanadium compds. for anticorrosive layer component preparation; corrosion-resistant pre-coated steel sheets having bilayered coatings containing V oxide and phosphates)

IT 15469-60-0, Vanadium zinc oxide (V2Zn3O8)

RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(anticorrosive coating containing; corrosion-resistant pre-coated steel sheets having bilayered coatings containing V oxide and phosphates)

RN 15469-60-0 HCPLUS

CN Vanadium zinc oxide (V2Zn3O8) (CA INDEX NAME)

Component	Ratio	Component	
			Registry Number
O	8		17778-80-2
Zn	3		7440-66-6
V	2		7440-62-2

IT 7631-86-9, Silica, properties
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (colloidal, primer layer containing; corrosion-resistant pre-coated
 steel sheets having bilayered coatings containing V oxide and
 phosphates)
 RN 7631-86-9 HCPLUS
 CN Silica (CA INDEX NAME)



IT 262107-87-3P
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (corrosion-resistant pre-coated steel sheets having bilayered
 coatings containing V oxide and phosphates)
 RN 262107-87-3 HCPLUS
 CN Hexanedioic acid, polymer with (chloromethyl)oxirane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 4,4'-(1-methylethyldene)bis[phenol], 2-oxepanone and Takenate D 160N (9CI) (CA INDEX NAME)

CM 1

CRN 120993-98-8
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 502-44-3
 CMF C6 H10 O2



CM 3

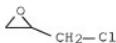
CRN 124-04-9
 CMF C6 H10 O4



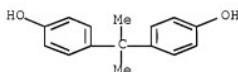
CM 4

CRN 106-89-8

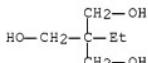
CMF C3 H5 Cl O



CM 5

CRN 80-05-7
CMF C15 H16 O2

CM 6

CRN 77-99-6
CMF C6 H14 O3

- IT 7664-38-2, Phosphoric acid, properties
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (sintering with vanadium compds. for anticorrosive layer component preparation; corrosion-resistant pre-coated steel sheets having bilayered coatings containing V oxide and phosphates)
 RN 7664-38-2 HCPLUS
 CN Phosphoric acid (CA INDEX NAME)



- L74 ANSWER 12 OF 15 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 2000:484244 HCPLUS Full-text
 DN 133:106380
 TI Precoated steel sheets having chromium-free anticorrosive

coatings

IN Ueda, Kohei; Nomura, Hiromasa; Kanai, Hiroshi; Furukawa, Hiroyasu; Kabeya, Motoo; Shimakura, Toshiaki
 PA Nippon Steel Corp., Japan; Nippon Paint Co., Ltd.
 SO Jpn. Kokai Tokkyo Koho, 21 pp.
 CODEN: JKXXAF

DT Patent

LA Japanese

PAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000199071	A	20000718	JP 1998-374877	19981228 <--
PRAI	JP 1998-374877		19981228	<--	

- AB The sheets have, on ≥1 side of (plated) steel sheets, undercoats selected from (1) film layers containing 30-500 parts (as solids) resins, 0.2-50 parts thiocarbonyl group-containing compds., and 0.1-5 parts (as PO₄) phosphoric acid compds., (2) film layers containing 10-500 parts (as solids) fine SiO₂ in addition to the components above, and (3) film layers 30-500 parts (as solids) resins, 0.2-50 parts thiocarbonyl group-containing compds., and 50-500 parts (as solids) fine SiO₂ and anticorrosive coating layers containing vanadate ion-releasing ion sources and phosphate ion-releasing ion sources in resins. Thus, an electrogalvanized steel sheet was coated with a composition containing an acrylic olefin resin 100, ST-N (SiO₂) 30, thiourea 2.5, and ammonium phosphate 1 g/L and then with a composition containing a polyester and 10% 1:1 mixture of MgHPO₄ and fired Mn203.V2O5 to give a coated sheet showing good corrosion resistance, workability, and bonding of the coating films to the substrates.
- IC ICM C23C0022-17
 ICS B05D0005-00; B05D0007-14; B32B0015-08
- CC 42-10 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55
- ST anticorrosive coating phosphate vanadate precoated steel
- IT Polyolefins
 RL: TEM (Technical or engineered material use); USES (Uses)
 (acrylic, undercoats; precoated steel sheets having undercoats and chromen-free anticorrosive coatings)
- IT Coating materials
 (anticorrosive; precoated steel sheets having undercoats and chromen-free anticorrosive coatings)
- IT Epoxy resins, uses
 Polyesters, uses
 Polyurethanes, uses
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (coating binders; precoated steel sheets having undercoats and chromen-free anticorrosive coatings)
- IT Galvanized steel
 RL: TEM (Technical or engineered material use); USES (Uses)
 (electrogalvanized; precoated steel sheets having undercoats and chromen-free anticorrosive coatings)
- IT Polyurethanes, uses
 Polyurethanes, uses
 Polyurethanes, uses
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (epoxy-polyester-; precoated steel sheets having undercoats and chromen-free anticorrosive coatings)
- IT Polyesters, uses
 Polyesters, uses
 Polyesters, uses

- RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (epoxy-polyurethane-; precoated steel sheets having undercoats and chromium-free anticorrosive coatings)
- IT Epoxy resins, uses
 Epoxy resins, uses
 Epoxy resins, uses
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyester-polyurethane-; precoated steel sheets having undercoats and chromium-free anticorrosive coatings)
- IT Galvanized steel
 RL: TEM (Technical or engineered material use); USES (Uses)
 (precoated steel sheets having undercoats and chromium-free anticorrosive coatings)
- IT 1305-78-8, Calcium oxide, uses 1314-62-1, Vanadium oxide, uses 2466-09-3, Pyrophosphoric acid 7664-38-2, Phosphoric acid, uses 7757-86-0 7757-87-1, Trimagnesium phosphate 7757-93-9, Calcium secondary phosphate 7758-87-4, Tricalcium phosphate 7779-90-0, Zinc phosphate 10343-62-1, Metaphosphoric acid 13477-39-9, Calcium metaphosphate 13550-42-0, Calcium vanadium oxide (ca3v2o8) 13573-13-2, Magnesium vanadium oxide (mgv2o6) 14100-64-2, Calcium vanadium oxide (cav2o6) 14986-94-8, Manganese vanadium oxide (mnv2o6) 15469-60-0, Zinc vanadium oxide (zn3v2o8) 115493-59-9, Manganese vanadium oxide (mn3v2o11) 115493-63-5, Manganese vanadium oxide (mnv2o7) 138882-01-6, Manganese vanadium oxide (mnvo4)
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (anticorrosive pigment; precoated steel sheets having undercoats and chromium-free anticorrosive coatings)
- IT 7631-66-9, ST-N, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (colloidal, in undercoats; precoated steel sheets having undercoats and chromium-free anticorrosive coatings)
- IT 62-56-6, Thiourea, uses 10124-31-9, Ammonium phosphate
 RL: TEM (Technical or engineered material use); USES (Uses)
 (in undercoats; precoated steel sheets having undercoats and chromium-free anticorrosive coatings)
- IT 264148-16-5P, Adipic acid-1,3-bis(isocyanatomethyl)cyclohexane-dimethyl isophthalate-dipropylene glycol-ethylene glycol-1,6-hexanediol-Placcel G 402-trimethylolpropane copolymer 264148-23-4P 264148-23-4P, Adipic acid-1,3-bis(isocyanatomethyl)cyclohexane-dipropylene glycol-ethylene glycol-hydrogenated bisphenol A-Placcel G 402-trimethylolpropane copolymer 282107-91-9P 282107-92-0P 282107-93-1P 282543-26-4P 282543-27-5P 282543-28-6P 282543-29-7P 282543-30-0P 282543-31-1P 282543-32-2P 282543-33-3P
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (precoated steel sheets having undercoats and chromium-free anticorrosive coatings)
- IT 12597-69-7, Steel, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (precoated steel sheets having undercoats and chromium-free anticorrosive coatings)
- IT 7664-38-2, Phosphoric acid, uses 7779-90-0, Zinc phosphate 15469-60-0, Zinc vanadium oxide (zn3v2o8)
 RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (anticorrosive pigment; precoated steel sheets having undercoats and chromium-free anticorrosive coatings)

RN 7664-38-2 HCPLUS
 CN Phosphoric acid (CA INDEX NAME)



RN 7779-90-0 HCPLUS
 CN Phosphoric acid, zinc salt (2:3) (CA INDEX NAME)



●3/2 Zn

RN 15469-60-0 HCPLUS
 CN Vanadium zinc oxide (V2Zn3O8) (CA INDEX NAME)

Component	Ratio	Component	
			Registry Number
O	8		17778-80-2
Zn	3		7440-66-6
V	2		7440-62-2

IT 7631-86-9, ST-N, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (colloidal, in undercoats; precoated steel sheets having
 undercoats and chromium-free anticorrosive coatings)

RN 7631-86-9 HCPLUS
 CN Silica (CA INDEX NAME)



IT 282543-28-6P

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (precoated steel sheets having undercoats and chromium-free
 anticorrosive coatings)

RN 282543-28-6 HCPLUS
 CN Hexanedioic acid, polymer with (chloromethyl)oxirane, 2-ethyl-2-
 (hydroxymethyl)-1,3-propanediol, 4,4'-(1-methylethylidene)bis[cyclohexanol
], 4,4'-(1-methylethylidene)bis[phenol], 2-oxepanone and Takenate D 160N
 (9CI) (CA INDEX NAME)

CM 1

CRN 120993-98-8
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 502-44-3
 CMF C6 H10 O2



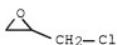
CM 3

CRN 124-04-9
 CMF C6 H10 O4



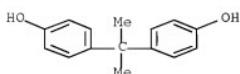
CM 4

CRN 106-89-8
 CMF C3 H5 Cl O



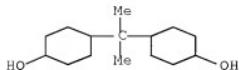
CM 5

CRN 80-05-7
 CMF C15 H16 O2



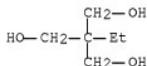
CM 6

CRN 80-04-6
CME C15 H28 O2



CM 7

CRN 77-99-6
CME C6 H14 O3



IT 12597-69-3, Steel, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(precoated steel sheets having undercoats and chromium-free
anticorrosive coatings)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L74 ANSWER 13 OF 15 HCPLUS COPYRIGHT 2007 ACS on STN

AN 2000:484171 HCPLUS Full-text

DN 133:90819

TI Anticorrosive, nontoxic coatings for precoated metal sheets

IN Furukawa, Hiroyasu; Kanai, Hiroshi; Ueda, Kohei; Takahashi, Akira; Nomura, Hiromasa; Miyabayashi, Eime; Hirata, Fumiaki

PA Nippon Steel Corp., Japan; Takeda Chemical Industries, Ltd.

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000198963	A	20000718	JP 1998-374742	19981228 <--
PRAI JP 1998-374742		19981228	<--	

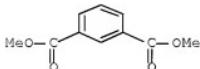
AB The coatings comprise as film-forming resin components (a) polyester polyols with functionality ≥ 3 , (b) epoxy resins having secondary OH groups on which lactones or alkylene oxides are added, and (c) blocked organic polyisocyanates or blocked prepolymers of organic polyisocyanates and active H compds. and as non-Cr corrosion inhibitors phosphate ion sources and vanadate ion sources (forming ions in presence of H₂O and O). Thus, 600 parts of a 1.52:3.02:2.27 (mol) hydrogenated bisphenol A-adipic acid-trimethylolpropane polyester polyol and 400 parts Placel G 402 (ϵ -caprolactone-bisphenol A epoxy resin adduct) were dissolved in cyclohexanone to give a solution (A), sep., 241.6 parts 1,3-

bis(isocyanatomethyl)cyclohexane was treated with 180.6 parts Me Et ketoxime and further treated with 177.0 parts polyester polyol (adipic acid-ethylene glycol-trimethylolpropane-dipropylene glycol copolymer) to give a blocked polyisocyanate solution, 24.5 parts of which was mixed with 43.4 parts A, premixed 5 parts MgHPO₄ and 5 parts Mn203.V205, and 1,1,3,3-tetrabutyl-1,3-diacytinoxidannoxane, applied on a galvanized steel sheet, baked, and over-coated to give a test piece showing excellent corrosion resistance.

- IC ICM C09D0175-04
ICS C09D0005-08; C23C0022-17; C23C0022-40
CC 42-10 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55
ST epoxy polyester polyurethane coating anticorrosive steel;
phosphate vanadate corrosion inhibitor polyurethane coating
IT Galvanized steel
RL: MSC (Miscellaneous)
(anticorrosive, nontoxic coatings for precoated metal sheets)
IT 502-44-3DP, *s*-Caprolactone, reaction products with epoxy resins,
polymers 264148-16-5P, Adipic acid-1,3-bis(isocyanatomethyl)cyclohexane-
dimethyl isophthalate-dipropylene glycol-ethylene glycol-1,6-hexanediol-
Placel G 402-trimethylolpropane copolymer 264148-17-6P
264148-18-7P, Dimethyl isophthalate-1,6-hexanediol-Placel G
402-Takenate D 160N-trimethylolpropane copolymer 264148-19-8P
264148-20-1P 264148-21-2P 264148-22-3P 264148-23-4P 264148-23-4P
281660-41-1P 281660-42-2P 281660-43-3P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(anticorrosive, nontoxic coatings for precoated metal sheets)
IT 1305-62-0, Calcium hydroxide, uses 1305-78-8, Calcium oxide, uses
1310-65-2, Lithium hydroxide 1314-34-7, Vanadium trioxide 1314-56-3,
Phosphorus pentoxide, uses 2466-09-3, Pyrophosphoric acid
7664-38-2, Orthophosphoric acid, uses 7757-86-0 7757-87-1,
Trimagnesium phosphate 7757-93-9 7758-23-8 7758-87-4, Calcium
phosphate 7779-90-0, Zinc phosphate 10343-62-1, Metaphosphoric
acid 12040-58-3 13477-39-9, Calcium metaphosphate 13550-42-0,
Calcium vanadium oxide (Ca3V2O8) 13573-13-2, Magnesium vanadium oxide
(MgV2O6) 14100-64-2, Calcium vanadium oxide (CaV2O6)) 14986-94-8,
Manganese vanadium oxide (MnV2O6) 15469-60-0, Vanadium zinc
oxide (V2Zn3O8) 15607-56-4, Cobalt vanadium oxide (CoV2O6)
138882-01-6, Manganese vanadium oxide (MnVO4)
RL: MOA (Modifier or additive use); USES (Uses)
(anticorrosive, nontoxic coatings for precoated metal sheets)
IT 264148-18-7P, Dimethyl isophthalate-1,6-hexanediol-Placel G
402-Takenate D 160N-trimethylolpropane copolymer
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(anticorrosive, nontoxic coatings for precoated metal sheets)
RN 264148-18-7 HCAPLUS
CN 1,3-Benzenedicarboxylic acid, dimethyl ester, polymer with
(chloromethyl)oxirane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol,
1,6-hexanediol, 4,4'-(1-methylethylidene)bis[phenol], 2-oxepanone and
Takenate D 160N (9CI) (CA INDEX NAME)
- CM 1
- CRN 120993-98-8
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 1459-93-4
CMF C10 H10 O4

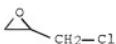
CM 3

CRN 629-11-8
CMF C6 H14 O2

CM 4

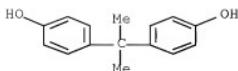
CRN 502-44-3
CMF C6 H10 O2

CM 5

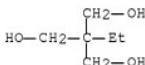
CRN 106-89-8
CMF C3 H5 Cl O

CM 6

CRN 80-05-7
CMF C15 H16 O2



CM 7

CRN 77-99-6
CMF C6 H14 O3

IT 7664-38-2, Orthophosphoric acid, uses 7779-90-0, Zinc phosphate 15469-60-0, Vanadium zinc oxide (V2Zn3O8)
 RL: MOA (Modifier or additive use); USES (Uses)
 (anticorrosive, nontoxic coatings for precoated metal sheets)
 RN 7664-38-2 HCPLUS
 CN Phosphoric acid (CA INDEX NAME)



RN 7779-90-0 HCPLUS
 CN Phosphoric acid, zinc salt (2:3) (CA INDEX NAME)



●3/2 Zn

RN 15469-60-0 HCPLUS
 CN Vanadium zinc oxide (V2Zn3O8) (CA INDEX NAME)

Component	Ratio	Component	Registry Number
O	8		17778-80-2
Zn	3		7440-66-6
V	2		7440-62-2

L74 ANSWER 14 OF 15 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 2000:247305 HCPLUS Full-text
 DN 132:295206

TI Chromium-free pre-coated metal plates with high coating adhesion and corrosion resistance

IN Furukawa, Hiroyasu; Takahashi, Akira; Ueda, Kohei; Nomura, Hiromasa; Kanai, Hiroshi

PA Nippon Steel Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 26 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000107686	A	20000418	JP 1998-281199	19981002 <-
PRAI JP 1998-281199		19981002	<-	

AB Title plates consist of metal plates, silane coupler-containing aqueous resin primers, bottom coatings, and colored top coatings in which the bottom coatings prepared from compns. containing (A) ≥3 functional group-containing polyester-polyols, secondary OH-containing epoxy resin/lactone or alkylene oxide adducts, and blocked polyisocyanates or NCO-terminated prepolymers and (B) compds. releasing PO₄-3 and compds. releasing VO₄-3 ions in the presence of water and O₂. A galvanized steel plate was primed with an aqueous composition containing AP 1058, Hytec S 7024, and γ-(2-aminoethyl)aminopropyltrimethoxysilane, baked, coated with a composition containing adipic acid (I)-hydrogenated bisphenol A-trimethylolpropane (II) copolymer, Placcel G 402, and Me Et ketoxime-blocked I-II-dipropylene glycol-ethylene glycol-1,3-bis(isocyanatomethyl)cyclohexanecopolymer, MgHPO₄, Mn203.V205, and a catalyst, baked, topcoated with white FL 100HQ (polyester coating), and baked to form a plate showing good interlayer adhesion, flexural resistance (no cracks), and anticorrosion at cut and edge areas.

IC ICM B05D0007-14

ICS C09D0175-04; C23F0011-00; C08G0018-80

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55

ST silane coupler aq primer steel; anticorrosion coating adhesion steel; polyester polyol epoxy resin adduct polyisocyanate coating steel

IT 1314-56-3, Phosphorus pentaoxide, uses 1314-62-1, Vanadium oxide (V205), uses 2466-09-3, Pyrophosphoric acid 7664-38-2, Orthophosphoric acid, uses 7757-86-0, Magnesium hydrogenphosphate 7757-87-1, Trimagnesium diphosphate 7757-93-9, Calcium hydrogenphosphate 7758-23-8, Calcium bis(dihydrogen phosphate) 7758-87-4, TriCalcium diphosphate 7779-90-0, Zinc phosphate 10343-62-1, Metaphosphoric acid 13550-42-0, Calcium vanadium oxide (Ca1.5VO₄) 13573-13-2, Magnesium vanadium oxide (MgV206) 14986-94-8, Manganese vanadium oxide (MnV206) 15469-60-0, Vanadium zinc oxide (V2Zn308) 15607-56-4, Cobalt vanadium oxide (CoV206) 53801-86-8, Calcium metaphosphate 138882-01-6, Manganese vanadium oxide (MnVO₄) 154662-00-7, Calcium vanadium oxide (Ca0.5VO₃) 264148-25-6

RL: MOA (Modifier or additive use); USES (Uses)

(anticorrosive pigments; Cr-free precoated metal plates from aqueous primers and epoxy-polyester-polyurethane bottom coats and colored topcoats)

IT 264148-16-5P, Adipic acid-1,3-bis(isocyanatomethyl)cyclohexane-dimethyl isophthalate-dipropylene glycol-ethylene glycol-1,6-hexanediol-Placcel G 402-trimethylolpropane copolymer 264148-17-6P, Adipic

acid- α,ω -diisocyanato-1,3-dimethylbenzene-dimethyl isophthalate-dipropylene glycol-ethylene glycol-1,6-hexanediol-Placcel G 402-trimethylopropane copolymer 264148-18-7P, Dimethyl isophthalate-1,6-hexanediol-Placcel G 402-trimethylopropane-Takenate D 160N copolymer 264148-19-8P 264148-20-1P 264148-21-2P, Bis(2-hydroxyethyl) terephthalate-Placcel G 402-sebacic acid- α,α,α -tetramethyl-m-xylenediisocyanate- trimethylopropane copolymer 264148-22-3P 264148-23-4P 264148-24-5P, Adipic acid-3-methyl-1,5-pentanediol-Placcel G 402-succinic acid-trimethylopropane-Takenate D 160N copolymer RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (bottom coatings; Cr-free precoated metal plates from aqueous primers and epoxy-polyester-polyurethane bottom coats and colored topcoats)

IT 75-79-6, Methyltrichlorosilane 1760-24-3
4420-74-0

RL: MOA (Modifier or additive use); USES (Uses) (coupler; Cr-free precoated metal plates from aqueous primers and epoxy-polyester-polyurethane bottom coats and colored topcoats)
IT 7664-38-2, Orthophosphoric acid, uses 7779-90-0, Zinc phosphate 15469-60-0, Vanadium zinc oxide (V2Zn3O8)
RL: MOA (Modifier or additive use); USES (Uses) (anticorrosive pigments; Cr-free precoated metal plates from aqueous primers and epoxy-polyester-polyurethane bottom coats and colored topcoats)

RN 7664-38-2 HCPLUS

CN Phosphoric acid (CA INDEX NAME)



RN 7779-90-0 HCPLUS
CN Phosphoric acid, zinc salt (2:3) (CA INDEX NAME)



●3/2 Zn

RN 15469-60-0 HCPLUS
CN Vanadium zinc oxide (V2Zn3O8) (CA INDEX NAME)

Component	Ratio	Component	
			Registry Number
O	8		17778-80-2
Zn	3		7440-66-6
V	2		7440-62-2

IT 264148-18-7P, Dimethyl isophthalate-1,6-hexanediol-Placcel G
 402-trimethylolpropane-Takenate D 160N copolymer 264148-24-5P,
 Adipic acid-3-methyl-1,5-pentanediol-Placcel G 402-succinic
 acid-trimethylolpropane-Takenate D 160N copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (bottom coatings; Cr-free precoated metal plates from aqueous primers and
 epoxy-polyester-polyurethane bottom coats and colored topcoats)

RN 264148-18-7 HCPLUS

CN 1,3-Benzenedicarboxylic acid, dimethyl ester, polymer with
 (chloromethyl)oxirane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol,
 1,6-hexanediol, 4,4'-(1-methylethylidene)bis[phenol], 2-oxepanone and
 Takenate D 160N (9CI) (CA INDEX NAME)

CM 1

CRN 120993-98-8

CMF Unspecified

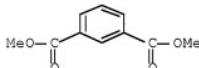
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 1459-93-4

CMF C10 H10 O4



CM 3

CRN 629-11-8

CMF C6 H14 O2



CM 4

CRN 502-44-3

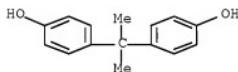
CMF C6 H10 O2



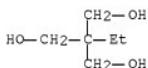
CM 5

CRN 106-89-8
CMF C3 H5 Cl O

CM 6

CRN 80-05-7
CMF C15 H16 O2

CM 7

CRN 77-99-6
CMF C6 H14 O3

RN 264148-24-5 HCPLUS

CN Hexanedioic acid, polymer with butanedioic acid, (chloromethyl)oxirane, 2-ethyl-2-(hydroxymethyl)-1,3-propanediol, 4,4'-(1-methylethylidene)bis[phenol], 3-methyl-1,5-pentanediol, 2-oxepanone and Takenate D 160N (9CI) (CA INDEX NAME)

CM 1

CRN 120993-98-8
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 4457-71-0
CMF C6 H14 O2



CM 3

CRN 502-44-3
CMF C6 H10 O2

CM 4

CRN 124-04-9
CMF C6 H10 O4

CM 5

CRN 110-15-6
CMF C4 H6 O4

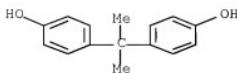
CM 6

CRN 106-89-8
CMF C3 H5 Cl O

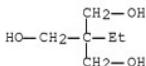
CM 7

CRN 80-05-7

CMF C15 H16 O2



CM 8

CRN 77-99-6
CMF C6 H14 O3IT 75-79-6, Methyltrichlorosilane 1760-24-3
4420-74-0RL: MOA (Modifier or additive use); USES (Uses)
(coupler; Cr-free precoated metal plates from aqueous primers and
epoxy-polyester-polyurethane bottom coats and colored topcoats)

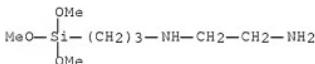
RN 75-79-6 HCAPLUS

CN Silane, trichloromethyl- (CA INDEX NAME)



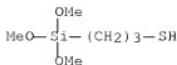
RN 1760-24-3 HCAPLUS

CN 1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]- (CA INDEX NAME)



RN 4420-74-0 HCAPLUS

CN 1-Propanethiol, 3-(trimethoxysilyl)- (CA INDEX NAME)



L74 ANSWER 15 OF 15 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 1987:556500 HCAPLUS Full-text

DN 107:156500

TI Thin-film-type durable anticorrosive coating material compositions

IN Kurokawa, Yukichi; Aoki, Hiroshi; Matsuo, Shunichi

PA Shinto Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

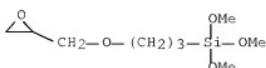
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62054772	A	19870310	JP 1985-195154	19850904 <--
	JP 07030271	B	19950405		
PRAI	JP 1985-195154		19850904	<--	
AB	Undercoating materials contain polymeric epoxy polyol resins, polyisocyanates, rustproofing pigments, H ₃ PO ₄ , and coupling agents. Zn-plated steel was coated with a mixture of Epikote 1009, solvents, additives, H ₃ PO ₄ , and hexamethylene diisocyanate and topcoated with an epoxy coating composition				
ICM	C09D0005-08				
ICS	C09D0003-72				
CC	42-9 (Coatings, Inks, and Related Products)				
	Section cross-reference(s): 55, 56				
IT	2530-83-8, A187				
	RL: USES (Uses) (coupling agents, in anticorrosive undercoatings)				
IT	13530-65-9, Zinc chromate				
	RL: USES (Uses) (rustproofing pigments, in undercoating compns.)				
IT	110505-87-0				
	RL: USES (Uses) (undercoatings containing rustproofing pigments and)				
IT	7664-38-2, Phosphoric acid, uses and miscellaneous				
	RL: USES (Uses) (undercoatings containing, anticorrosive)				
IT	2530-83-8, A187				
	RL: USES (Uses) (coupling agents, in anticorrosive undercoatings)				
RN	2530-83-8 HCAPLUS				
CN	Oxirane, 2-[{3-(trimethoxysilyl)propoxy}methyl]- (CA INDEX NAME)				



IT 13530-65-9, Zinc chromate

RL: USES (Uses)

(rustproofing pigments, in undercoating compns.)

RN 13530-65-9 HCAPLUS

CN Chromic acid (H₂CrO₄), zinc salt (1:1) (CA INDEX NAME)

● Zn

IT 110585-87-0

RL: USES (Uses)

(undercoatings containing rustproofing pigments and)

RN 110585-87-0 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane and Sumidur N 75 (9CI) (CA INDEX NAME)

CM 1

CRN 72429-63-1

CMF Unspecified

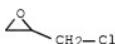
CCI MAN

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CM 2

CRN 106-89-8

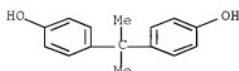
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



IT 7664-33-2, Phosphoric acid, uses and miscellaneous

RL: USES (Uses)

(undercoatings containing, anticorrosive)

RN 7664-38-2 HCAPLUS
 CN Phosphoric acid (CA INDEX NAME)



=> => d his

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 SEL RN

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 L2 36 S E1-E36
 L3 1 S L2 AND STEEL
 L4 7 S L2 AND ((ZN OR AL)/ELS OR ZINC OR ALUMIN?)
 L5 4 S L2 AND (P OR F)/ELS
 L6 6 S L2 AND 46.150.18/RID AND PMS/CI
 L7 1 S 174514-92-2
 L8 1 S 124671-40-5
 L9 18 S L2 NOT L3-L6
 L10 10 S L9 AND PMS/CI
 L11 1 S 214832-30-1
 L12 8 S L9 NOT L10
 L13 28725 S 80-05-7/CRN
 L14 19110 S L13 AND OC2/ES
 L15 2697 S (ISOCYAN? OR DIISOCYAN? OR TRIISOCYAN? OR POLYISOCYAN?)/ENTE
 SEL RN
 DEL SEL
 SEL RN 1-750
 L16 19 S E1-E750/CRN AND L14
 SEL RN L15 741-1500
 DEL SEL
 SEL RN L15 751-1500
 L17 109 S E1-E750/CRN AND L14
 DEL SEL
 SEL RN L15 1501-2250
 L18 137 S E1-E750/CRN AND L14
 DEL SEL
 SEL RN L15 2251-2697
 L19 316 S E1-E447/CRN AND L14
 L20 9171 S (URETHAN? OR POLYURETHAN?)/ENTE
 DEL SEL
 SEL RN 1-1000
 DEL SEL
 SEL RN 1-900
 L21 8 S E1-E900/CRN AND L14
 DEL SEL
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 L22 3 S E1-E900/CRN AND L14

DEL SEL
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 L23 4 S E1-E900/CRN AND L14
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 L25 21 S E1-E900/CRN AND L14
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 L26 14 S E1-E900/CRN AND L14
 DEL SEL
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 DEL SEL
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 L28 46 S E1-E900/CRN AND L14
 DEL SEL
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 L29 42 S E1-E900/CRN AND L14
 DEL SEL
 SEL RN L20 8101-9000
 L30 99 S E1-E900/CRN AND L14
 DEL SEL
 SEL RN L20 9001-9171
 L31 98 S E1-E171/CRN AND L14
 L32 361 S L21-L31
 L33 572 S L16-L19
 L34 1 S L10 AND CH2O
 L35 6 S L6 NOT 33830-06-7
 L36 796 S L32-L35
 L37 1388 S BISPHENOL?/ENTE
 L38 921 S L37 AND EPOXY?/ENTE
 SEL RN
 DEL SEL
 SEL RN L38
 L39 1697 S E1-E921/CRN AND N/ELS
 L40 2 S L38 AND (ISOCYAN? OR DIISOCYAN? OR TRIISOCYAN? OR POLYISOCYAN?
 L41 17 S L38 AND (URETHAN? OR POLYURETHAN?) /ENTE
 L42 19 S L40,L41
 L43 2493 S L36,L39,L42
 SAV TEMP L43 LAVILLA449A/A

FILE 'HCAPLUS' ENTERED AT 16:21:29 ON 01 OCT 2007

L44 1990 S L43
 L45 283 S L44 AND STEEL
 L46 113 S L44 AND L3
 E STEEL/CT
 L47 57 S L44 AND STEEL?/CT,CW
 E E3+ALL
 L48 136 S L44 AND E5+NT
 L49 283 S L45-L48
 L50 11 S L49 AND PY<=2004 NOT P/DT
 L51 255 S L49 AND (PD<=20040614 OR PRD<=20040614 OR AD<=20040614) AND P
 L52 266 S L50,L51
 L53 13 S L4 AND L52

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 L54 TRA L52 1- RN : 1905 TERMS

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 L55 1905 SEA L54
 L56 57 S L55 AND (ZN/ELS OR ZINC OR 7440-66-6/CRN)
 L57 48 S L55 AND (AL/ELS OR ALUMIN? OR 7429-90-5/CRN)
 L58 82 S L56,L57

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 L59 85 S L58 AND L52
 L60 85 S L53,L59
 L61 15 S L60 AND L5

FILE 'REGISTRY' ENTERED AT 16:25:38 ON 01 OCT 2007
 L62 9 S L55 AND 6/F
 L63 6 S L62 NOT L5
 L64 83 S L55 AND SI/ELS
 L65 62 S L64 NOT PMS/CI
 L66 30 S L65 NOT (AYS OR TIS)/CI
 L67 29 S L66 NOT F6SI

FILE 'HCAPLUS' ENTERED AT 16:27:25 ON 01 OCT 2007
 L68 12 S L67,L12 AND L61
 L69 15 S L61,L68
 L70 15 S L1,L69
 L71 4 S L70 AND JFE?/PA,CS,CO
 L72 5 S L70 AND (MIYOSHI ? OR SASAKI ? OR YOSHIMI ? OR MATSUZAKI ? OR
 L73 0 S L70 AND (TATSUYA ? OR KENICHI ? OR NAOTO ? OR AKIRA ? OR KAZU
 L74 15 S L70-L73

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 SEL HIT RN

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 SAV TEMP L43 LAVILLA559B/A
 L76 18 S L75 AND L43

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STRUCTURE FILE UPDATES: 1 OCT 2007 HIGHEST RN 948988-82-7
 DICTIONARY FILE UPDATES: 1 OCT 2007 HIGHEST RN 948988-82-7

New CAS Information Use Policies, enter HELP USAGETERMS for details.

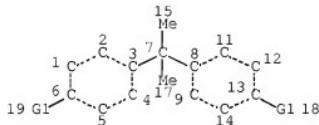
TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

Please note that search-term pricing does apply when
 conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stdoc/properties.html>

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L1 STR



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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 8 3
NUMBER OF NODES IS 17

STEREO ATTRIBUTES: NONE
L2 SCR 2043
L4 65274 SEA FILE=REGISTRY SSS FUL L1 AND L2
L5 29350 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND OC2/ES
L6 2925 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND CH2O
L7 13421 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND (C2H4O OR C3H6O OR C4H8O OR C5H10O OR C6H12O)
L8 38913 SEA FILE=REGISTRY ABB=ON PLU=ON (L5 OR L6 OR L7)
L11 STR



NODE ATTRIBUTES:
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CONNECT IS E2 RC AT 3
CONNECT IS E2 RC AT 4
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DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 6

STEREO ATTRIBUTES: NONE
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100.0% PROCESSED 6329 ITERATIONS
SEARCH TIME: 00.00.01

5777 ANSWERS

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L5	29350 S L4 AND OC2/ES
L6	2925 S L4 AND CH20
L7	13421 S L4 AND (C2H4O OR C3H6O OR C4H8O OR C5H10O OR C6H12O)
L8	38913 S L5-L7
L9	18970 S L8 AND N/ELS
L10	1692 S L8 AND NCNCNC/ES
L11	STR
L12	50 S L11 SAM SUB=L8
L13	5777 S L11 FUL SUB=L8 SAV TEMP L13 LAVILLA559C/A
L14	1386 S L10 NOT L13
L15	1 S 12597-69-2
L16	96307 S STEEL
L17	96306 S L16 NOT L15
L18	8978 S L8 AND UNSPECIFIED
L19	9325 S L9 NOT L10,L13,L18

FILE 'HCAPLUS' ENTERED AT 07:34:31 ON 02 OCT 2007

L20	3584 S L13
L21	859 S L14
L22	6051 S L18
L23	12204 S L19
L24	221872 S L15
L25	743006 S STEEL
L26	21866 S STEEL?/CT,CW E STEEL/CT E E3+ALL
L27	332682 S E5+NT E E54+ALL E E14+ALL
L28	12496 S E4+OLD
L29	4497 S L26 NOT L27,L28
L30	1786 S L20-L23 AND L24-L29
L31	6696 S L20-L23 AND PY<=2004 NOT P/DT
L32	11614 S L20-L23 AND (PD<=20040614 OR PRD<=20040614 OR AD<=20040614) A
L33	18310 S L31,L32
L34	1650 S L33 AND L30
L35	336 S L17 AND L33
L36	1797 S L34,L35

FILE 'REGISTRY' ENTERED AT 07:39:54 ON 02 OCT 2007

FILE 'HCAPLUS' ENTERED AT 07:39:56 ON 02 OCT 2007
L37 TRA L36 1- RN : 8945 TERMS

FILE 'REGISTRY' ENTERED AT 07:40:38 ON 02 OCT 2007
L38 8945 SEA L37

L39 1 S L38 AND 7664-38-2
 L40 27 S L38 AND 6/F
 L41 16 S L40 NOT PMS/CI
 L42 7 S L41 AND 2/NC AND NR>=1
 L43 9 S L41 NOT L42
 L44 7 S L43 NOT C6/ES
 L45 6 S L44 NOT C4HF6NO3
 L46 126 S L38 AND SI/ELS NOT (PMS OR AYS OR TIS OR CCS)/CI
 L47 39 S L46 AND NC>=2
 L48 7 S L47 AND (H4O4SI OR H2O3SI)
 L49 87 S L46 NOT L47
 L50 84 S L49 NOT O2SI
 L51 83 S L50 NOT SI/MF
 L52 234 S L38 AND (ZN OR AL)/ELS
 L53 232 S L38 AND (ZINC OR ALUMIN?)
 L54 142 S L38 AND (7440-66-6 OR 7429-90-5)/CRN
 L55 240 S L52-L54
 L56 97 S L55 NOT (AYS OR TIS)/CI
 L57 70 S L56 NOT (PMS OR CCS)/CI
 L58 27 S L56 NOT L57
 L59 143 S L55 NOT L56
 L60 140 S L59 NOT L17

FILE 'HCAPLUS' ENTERED AT 07:50:19 ON 02 OCT 2007

L61 40 S L39,L45 AND L36
 L62 143 S L48,L51 AND L36
 L63 140 S L60 AND L36
 L64 24 S L61 AND L62,L63
 L65 16 S L62 AND L63
 L66 31 S L64,L65
 L67 47 S L61,L66
 L68 4 S L67 NOT ?EPOX?
 SEL AN 2
 L69 1 S E1-E2 AND L68
 L70 43 S L67 NOT L68
 SEL HIT RN

FILE 'REGISTRY' ENTERED AT 08:06:17 ON 02 OCT 2007

L71 165 S E3-E167
 L72 88 S L71 AND L8
 L73 29 S L72 AND L13
 L74 15 S L72 AND L14
 L75 49 S L72 AND L18,L19
 L76 7 S L74 NOT (P OR S)/ELS
 L77 31 S L75 AND UNSPECIFIED
 L78 24 S L77 NOT 502-44-3/CRN
 L79 22 S L78 NOT C6H6O
 L80 21 S L79 NOT C3H4O2
 L81 20 S L80 NOT C8H6O4
 L82 18 S L81 NOT C2H4N4
 SEL RN 9-12 17
 L83 13 S L82 NOT E168-E172
 SEL RN L76 4
 L84 1 S E173
 L85 7 S L73 NOT C6H10O2
 L86 6 S L85 NOT C5H12O2
 L87 4 S L86 NOT N2CNC/ES
 L88 23 S L78 NOT L87
 L89 11 S L88 NOT L83,L84
 L90 16 S L83,L84,L87

L91 12 S 124057-69-8 OR 112154-00-4 OR 72429-63-1 OR 120299-87-8 OR 19
 L92 4 S L90 AND (72429-63-1 OR 199876-59-0 OR 174514-92-2 OR 124671-4
 L93 4 S L91 AND (72429-63-1 OR 199876-59-0 OR 174514-92-2 OR 124671-4
 L94 1 S 66810-89-7
 L95 7 S L87,L92

FILE 'HCAPLUS' ENTERED AT 08:28:31 ON 02 OCT 2007
 L96 27 S L95
 L97 0 S L96 AND PY<=2004 NOT P/DT
 L98 22 S L96 AND (PD<=20040614 OR PRD<=20040614 OR AD<=20040614) AND P
 L99 16 S L98 AND STEEL
 L100 10 S L98 AND STEEL?/CW,CT
 L101 16 S L98 AND L25-L28
 L102 8 S L98 AND L15
 SEL RN L98

FILE 'REGISTRY' ENTERED AT 08:30:10 ON 02 OCT 2007
 L103 228 S E174-E401
 L104 3 S L103 AND L16

FILE 'HCAPLUS' ENTERED AT 08:30:37 ON 02 OCT 2007
 L105 10 S L104 AND L98
 L106 17 S L99-L102,L105
 L107 5 S L98 NOT L106

FILE 'REGISTRY' ENTERED AT 08:31:53 ON 02 OCT 2007
 L108 35 S L103 AND ((ZN OR AL)/ELS OR ZINC OR ALUMIN? OR (7440-66-6 OR
 L109 27 S L108 AND (AYS OR TIS)/CI
 L110 1 S L103 AND L39
 L111 4 S L103 AND 6/F
 L112 10 S L103 AND SI/ELS NOT (STEEL OR (AYS OR TIS OR PMS)/CI)
 L113 8 S L112 NOT (F6SI OR O2SI)

FILE 'HCAPLUS' ENTERED AT 08:33:51 ON 02 OCT 2007
 L114 11 S L98 AND L104,L110,L111,L113
 L115 10 S L98 AND L109
 L116 22 S L98-L102,L105-L107,L114-L115

FILE 'REGISTRY' ENTERED AT 08:34:34 ON 02 OCT 2007

=> fil hcaplus
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FILE COVERS 1907 - 2 Oct 2007 VOL 147 ISS 15
 FILE LAST UPDATED: 1 Oct 2007 (20071001/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d l116 bib abs hitind hitstr retable tot

L116 ANSWER 1 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN

AN 2005:1240634 HCPLUS Full-text

DN 143:479459

TI Highly corrosion-resistant compositions for coating non-chromated steel surface without interfering the welding ability and their formation

IN Sasaki, Kenichi; Miyoshi, Tatsuya; Yoshimi, Naoto

PA JFE Steel Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 58 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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PI JP 2005325427 A 20051124 JP 2004-146335 20040517 <--

PRAI JP 2004-146335 20040517 <--

AB The steel (particularly automobile panel) surface is coated by a base layer and a top layer where the base layer is obtained from: (a) the reaction product of the condensation product of a polyalkylene glycol having specific mol. weight, a bisphenol-type epoxy resin, a compound containing active H and a polyisocyanate with an epoxy resin and an active H-containing hydrazine derivative in aqueous dispersion, (b) silane coupler, and (c) phosphoric acid or/and hexafluorometallic acid, and the top layer is obtained from epoxy group-containing resins having Mn 6000-20,000, Cr-free corrosion inhibitors, lubricants having mol. weight of <5000 and elec. conductive pigments.

IC C23C0022-07

ICS C23C0022-22; C23C0022-36; C23C0022-42; C23C0028-00

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55

ST corrosion resistant base coat top coat multilayer coating steei; welding property steei coating anticorrosive polyalkylene glycol epoxy resin; hydrazine deriv reaction modified epoxy resin coating steei; automobile panel steei anticorrosive coating polyisocyanate polyoxyalkylene epoxy resin

IT Coating materials

(anticorrosive; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)

IT Automobiles

(bodies; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)

IT Silanes

RL: MOA (Modifier or additive use); USES (Uses)
(coupling agents; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)

IT Polyoxyalkylenes, uses

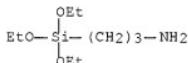
RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(epoxy; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their

- formation)
- IT Coupling agents
 (highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT Aminoplasts
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT Epoxy resins, uses
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (polyoxyalkylene; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT Galvanized steel
 RL: TEM (Technical or engineered material use); USES (Uses)
 (substrate; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT 97-77-8, Tetraethylthiuram disulfide 7631-86-9, Silica, uses
 29196-72-3, Aluminum tripolyphosphate 130638-76-5, Aluminum phosphomolybdate
 RL: MOA (Modifier or additive use); USES (Uses)
 (corrosion inhibitor; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT 919-30-2, KBE 903 1760-24-3, KBM 603 2530-83-8
 , KBM 403 2602-34-8, KBE 403 2897-60-1, KBM 402
 3069-29-2, KBM 602
 RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agent; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT 822-06-0, HMDI 4098-71-9, IPDI 9003-08-1, Melamine resin 93919-05-2,
 Desmodur BL-3175 124671-40-5, Takenate B 870N 174514-92-2, Duranate
 MF-B 80M
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (crosslinker; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT 7664-38-2, Phosphoric acid, uses 12021-95-3
 16961-83-4, Hexafluorosilicic acid 17439-11-1,
 Hexafluorotitanic acid
 RL: CAT (Catalyst use); USES (Uses)
 (highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT 67-51-6DP, 3,5-Dimethylpyrazole, reaction products with epoxy resins
 25068-38-6DP, Epikote 828, reaction products with pyrazole 25068-38-6P,
 Epikote 828 507271-32-1P, Bisphenol A-epichlorohydrin-Duranate
 MFK60X-polyethylene glycol-TDI copolymer 869804-46-6P,
 3-Amino-1,2,4-triazole-bisphenol A-epichlorohydrin-Duranate MF-K
 60X-polyethylene glycol-TDI copolymer 869804-47-7P, 3-Amino-1,2,4-
 triazole-Epikote 1256 copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (highly corrosion-resistant compns. for coating non-chromated

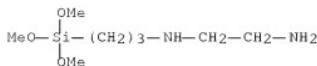
- steel surface without interfering welding ability and their formation)
- IT 214832-30-1, Epikote 1256
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT 12597-69-2, Steel, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (plated substrate; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT 111-90-0, Diethylene glycol monoethyl ether
 RL: MOA (Modifier or additive use); USES (Uses)
 (temporary blocking agent; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- IT 130638-76-5, Aluminum phosphomolybdate
 RL: MOA (Modifier or additive use); USES (Uses)
 (corrosion inhibitor; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- RN 130638-76-5 HCPLUS
- CN Aluminum molybdenum hydroxide oxide phosphate (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2
HO	x	14280-30-9
O ₄ P	x	14265-44-2
Mo	x	7439-98-7
Al	x	7429-90-5

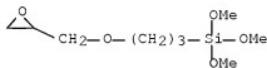
- IT 919-30-2, KBE 903 1760-24-3, KBM 603 2530-33-8
 , KBM 403 2602-34-8, KBE 403 2897-60-1, KBM 402
 3069-29-2, KBM 602
 RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agent; highly corrosion-resistant compns. for coating non-chromated steel surface without interfering welding ability and their formation)
- RN 919-30-2 HCPLUS
- CN 1-Propanamine, 3-(triethoxysilyl)- (CA INDEX NAME)



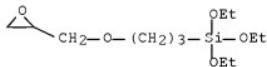
- RN 1760-24-3 HCPLUS
- CN 1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]- (CA INDEX NAME)



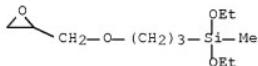
RN 2530-83-8 HCAPLUS
 CN Oxirane, 2-[{3-(trimethoxysilyl)propoxy]methyl]- (CA INDEX NAME)



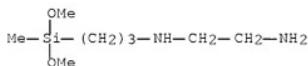
RN 2602-34-8 HCAPLUS
 CN Oxirane, 2-[{3-(triethoxysilyl)propoxy]methyl]- (CA INDEX NAME)



RN 2897-60-1 HCAPLUS
 CN Oxirane, 2-[{3-(diethoxymethylsilyl)propoxy]methyl]- (CA INDEX NAME)



RN 3069-29-2 HCAPLUS
 CN 1,2-Ethanediamine, N1-[3-(dimethoxymethylsilyl)propyl]- (CA INDEX NAME)



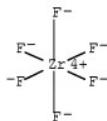
IT 7664-38-2, Phosphoric acid, uses 12021-95-3
 16961-83-4, Hexafluorosilicic acid 17439-11-1,
 Hexafluorotitanic acid

RL: CAT (Catalyst use); USES (Uses)
 (highly corrosion-resistant compns. for coating non-chromated
 steel surface without interfering welding ability and their
 formation)

RN 7664-38-2 HCAPLUS
 CN Phosphoric acid (CA INDEX NAME)

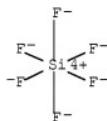


RN 12021-95-3 HCAPLUS
 CN Zirconate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



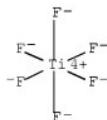
●2 H⁺

RN 16961-83-4 HCAPLUS
 CN Silicate(2-), hexafluoro-, hydrogen (1:2) (CA INDEX NAME)



●2 H⁺

RN 17439-11-1 HCAPLUS
 CN Titanate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



●2 H⁺

IT 507271-32-1P, Bisphenol A-epichlorohydrin-Duranate
 MFK60X-polyethylene glycol-TDI copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
 (Properties); TEM (Technical or engineered material use); PREP
 (Preparation); USES (Uses)
 (highly corrosion-resistant compns. for coating non-chromated
 steel surface without interfering welding ability and their
 formation)

RN 507271-32-1 HCPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane,
 1,3-diisocyanatomethylbenzene, Duranate MF-K 60X and α -hydro- ω -
 hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 199876-59-0

CMF Unspecified

CCI PMS, MAN

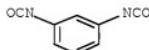
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



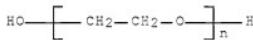
D1-Me

CM 3

CRN 25322-68-3

CMF (C2 H4 O)n H2 O

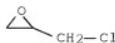
CCI PMS



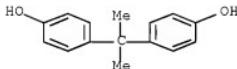
CM 4

CRN 106-89-8

CMF C3 H5 Cl O



CM 5

CRN 80-05-7
CMF C15 H16 O2

IT 12597-69-3, Steel, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(plated substrate; highly corrosion-resistant compns. for coating
non-chromated steel surface without interfering welding
ability and their formation)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L116 ANSWER 2 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN

AN 2004:1127448 HCPLUS Full-text

DN 142:58372

TI Highly corrosion-resistant surface-treated steel sheet and
method for producing sameIN Miyoshi, Tatsuya; Sasaki, Kenichi; Yoshimi, Naoto; Matsuzaki, Akira; Okai,
Kazuhisa; Ooshima, Takao; Nakano, Takashi; Murata, Masahiro; Tanaka,
Syoichi

PA JFE Steel Corporation, Japan; Kansai Paint Co., Ltd.

SO PCT Int. Appl., 122 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004111141	A1	20041223	WO 2004-JP8650	20040614 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2006002167	A	20060105	JP 2004-173337	20040611 <--

EP 1634932 R: DE, FR, GB	A1	20060315	EP 2004-736805	20040614 <--
CN 1836016	A	20060920	CN 2004-80023517	20040614 <--
US 2006141230	A1	20060629	US 2005-559641	20051202 <--
PRAI JP 2003-171344	A	20030616	<--	
JP 2004-146334	A	20040517	<--	
WO 2004-JP8650	W	20040614	<--	
AB A surface-treated steel sheet is disclosed which comprises a zinc-plated steel sheet, a surface treatment film formed on the surface of the zinc-plated steel sheet by applying a surface treatment composition to the steel sheet and drying it, and an upper coating film formed over the surface treatment film by applying a coating composition for the upper coating film over the surface treatment film and drying it. The surface treatment composition contains an aqueous epoxy resin dispersion, a silane coupling agent, and a phosphoric acid and/or a fluorometallic acid. The coating composition for the upper coating film contains a high mol. weight, epoxy group-containing resin having a number-average mol. weight of 6000-20,000.				
IC ICM C09D0163-00				
ICS C09D0175-00; C23C0028-04				
CC 42-10 (Coatings, Inks, and Related Products)				
Section cross-reference(s): 55				
ST zinc plated steel sheet anticorrosive coating epoxy resin dispersion; silane coupling agent epoxy dispersion coating steel sheet; phosphoric acid epoxy dispersion anticorrosive coating steel sheet; fluorometallic acid epoxy dispersion anticorrosive coating steel sheet				
IT Coating materials (anticorrosive; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)				
IT Coupling agents (coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)				
IT Polyurethanes, uses RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses) (coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)				
IT Polyoxyalkylenes, uses RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (epoxy) coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)				
IT Epoxy resins, uses RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyoxyalkylene; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)				
IT Silanes RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses) (silanes; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)				
IT Galvanized steel RL: MSC (Miscellaneous) (substrate; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)				
IT 38830-06-7P, Bisphenol A-diethanolamine-epichlorohydrin copolymer 85023-89-8P, Bisphenol A;epichlorohydrin;formaldehyde;melamine copolymer				

- 134291-65-9P, Bisphenol A-epichlorohydrin-Takenate B 870N copolymer 184015-80-3P 247223-93-4P
 507271-32-1P, Bisphenol A-Duranate MFK60X-epichlorohydrin-polyethylene glycol-TDI copolymer 811448-86-9P 811448-87-0P
 811448-88-1P 811448-89-2P, Epikote 1256-formaldehyde-melamine copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)
- IT 7664-38-2, Phosphoric acid, uses 12021-95-3
 16961-83-4, Hexafluorosilicic acid 17439-11-1,
 Hexafluorotitanic acid
 RL: MOA (Modifier or additive use); USES (Uses)
 (coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)
- IT 168679-90-1, Permanic UC 20 190606-09-8, Takelac W 635 392315-60-5,
 Superflex 600 443919-87-7, Superflex E 2500 740843-34-9, Ucoat UX 2505
 745031-19-0, Adeka Bon-Tighter UX 206
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
 (coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)
- IT 919-30-2, KBE 903 1760-24-3, KBM 603 2530-83-8
 , KBM 403 2602-34-8, KBE 403 2897-66-1, KBE 402
 3069-29-2, KBM 602 5089-72-5, KBE 603 13822-56-5
 , KBE 903
 RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (coupler; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)
- IT 11149-84-1 32609-49-3 52369-06-2
 58465-32-0 112964-43-9 142240-64-0
 208469-25-4
 RL: MSC (Miscellaneous)
 (plating on steel; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)
- IT 12597-69-2, Steel, miscellaneous
 RL: MSC (Miscellaneous)
 (substrate, Zn alloy-plated; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)
- IT 134291-65-9P, Bisphenol A-epichlorohydrin-Takenate B 870N copolymer 184015-80-3P 247223-93-4P
 507271-32-1P, Bisphenol A-Duranate MFK60X-epichlorohydrin-polyethylene glycol-TDI copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)
- RN 134291-65-9 HCPLUS
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and Takenate B 870N (CA INDEX NAME)

CM 1

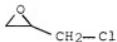
CRN 124671-40-5

CMF Unspecified

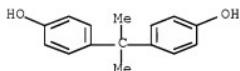
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

RN 184015-80-3 HCPLUS

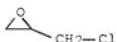
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and Duranate MF-B 80M (CA INDEX NAME)

CM 1

CRN 174514-92-2
CMF Unspecified
CCI PMS, MAN

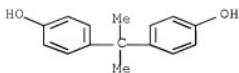
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2



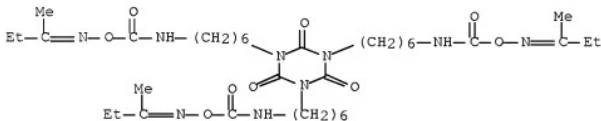
RN 247223-93-4 HCAPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[6-[{[(1-methylpropylidene)amino]oxy}carbonyl]amino]hexyl-, polymer with 2-(chloromethyl)oxirane and 4,4'-(1-methylethyldene)bis(phenol) (CA INDEX NAME)

CM 1

CRN 93919-05-2

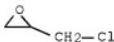
CMF C36 H63 N9 O9



CM 2

CRN 106-89-8

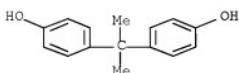
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



RN 507271-32-1 HCAPLUS

CN Phenol, 4,4'-(1-methylethyldene)bis-, polymer with (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene, Duranate MF-K 60X and α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

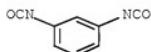
CM 1

CRN 199876-59-0
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

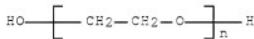
CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



D1-Me

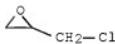
CM 3

CRN 25322-68-3
 CMF (C2 H4 O)n H2 O
 CCI PMS



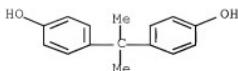
CM 4

CRN 106-89-8
 CMF C3 H5 Cl O



CM 5

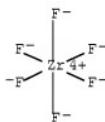
CRN 80-05-7
 CMF C15 H16 O2



IT 7664-36-2, Phosphoric acid, uses 12021-95-3
 16961-83-4, Hexafluorosilicic acid 17439-11-1,
 Hexafluorotitanic acid
 RL: MOA (Modifier or additive use); USES (Uses)
 (coatings for manufacture of highly corrosion-resistant surface-treated
 steel sheets)
 RN 7664-38-2 HCAPLUS
 CN Phosphoric acid (CA INDEX NAME)

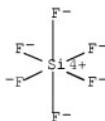


RN 12021-95-3 HCAPLUS
 CN Zirconate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



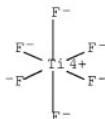
●2 H⁺

RN 16961-83-4 HCAPLUS
 CN Silicate(2-), hexafluoro-, hydrogen (1:2) (CA INDEX NAME)



●2 H⁺

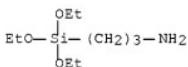
RN 17439-11-1 HCAPLUS
 CN Titanate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



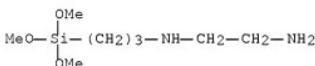
●2 H+

IT 919-30-2, KBE 903 1760-24-3, KBM 603 2530-83-8
, KBM 403 2602-34-8, KBE 403 2897-60-1, KBE 402
3069-29-2, KBM 602 5089-72-5, KBE 603 13822-56-5
, KBM 903
RL: MOA (Modifier or additive use); RCT (Reactant); RACT (Reactant or
reagent); USES (Uses)
(coupler; coatings for manufacture of highly corrosion-resistant
surface-treated steel sheets)

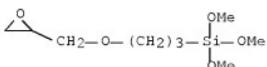
RN 919-30-2 HCPLUS
CN 1-Propanamine, 3-(triethoxysilyl)- (CA INDEX NAME)



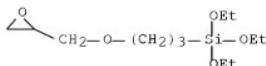
RN 1760-24-3 HCPLUS
CN 1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]- (CA INDEX NAME)



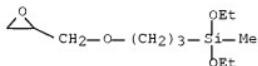
RN 2530-83-8 HCPLUS
CN Oxirane, 2-[{3-(trimethoxysilyl)propoxy}methyl]- (CA INDEX NAME)



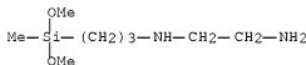
RN 2602-34-8 HCPLUS
CN Oxirane, 2-[{3-(triethoxysilyl)propoxy}methyl]- (CA INDEX NAME)



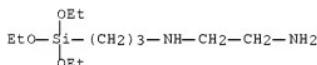
RN 2897-60-1 HCAPLUS
 CN Oxirane, 2-[3-(diethoxymethylsilyl)propoxy]methyl- (CA INDEX NAME)



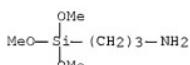
RN 3069-29-2 HCAPLUS
 CN 1,2-Ethanediamine, N1-[3-(dimethoxymethylsilyl)propyl]- (CA INDEX NAME)



RN 5089-72-5 HCAPLUS
 CN 1,2-Ethanediamine, N1-[3-(triethoxysilyl)propyl]- (CA INDEX NAME)



RN 13822-56-5 HCAPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)- (CA INDEX NAME)



IT 11147-84-1 12609-49-3 52360-06-2
 56465-32-0 112964-43-9 142240-64-0
 208469-25-4

RL: MSC (Miscellaneous)

(plating on steel; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)

RN 11149-84-1 HCPLUS
 CN Aluminum alloy, nonbase, Al,Zn (CA INDEX NAME)

Component Component
 Registry Number
 =====+=====+
 Al 7429-90-5
 Zn 7440-66-6

RN 12609-49-3 HCPLUS
 CN Aluminum alloy, base, Al 94,Si 6 (CA INDEX NAME)

Component Component Component
 Percent Registry Number
 =====+=====+=====+
 Al 94 7429-90-5
 Si 6 7440-21-3

RN 52360-06-2 HCPLUS
 CN Zinc alloy, base, Zn 88,Ni 12 (CA INDEX NAME)

Component Component Component
 Percent Registry Number
 =====+=====+=====+
 Zn 88 7440-66-6
 Ni 12 7440-02-0

RN 58465-32-0 HCPLUS
 CN Zinc alloy, base, Zn 90,Fe 10 (CA INDEX NAME)

Component Component Component
 Percent Registry Number
 =====+=====+=====+
 Zn 90 7440-66-6
 Fe 10 7439-89-6

RN 112964-43-9 HCPLUS
 CN Zinc alloy, base, Zn 100,Mg 0.5 (CA INDEX NAME)

Component Component Component
 Percent Registry Number
 =====+=====+=====+
 Zn 100 7440-66-6
 Mg 0.5 7439-95-4

RN 142240-64-0 HCPLUS
 CN Zinc alloy, base, Zn 94,Al 5,Mg 0.5 (CA INDEX NAME)

Component Component Component
 Percent Registry Number
 =====+=====+=====+
 Zn 94 7440-66-6
 Al 5 7429-90-5
 Mg 0.5 7439-95-4

RN 208469-25-4 HCPLUS
 CN Zinc alloy, base, Zn 91,Al 6,Mg 3 (CA INDEX NAME)

Component Component Component
 Percent Registry Number

Zn	91	7440-66-6
Al	6	7429-90-5
Mg	3	7439-95-4

IT 12597-69-2, Steel, miscellaneous

RL: MSC (Miscellaneous)

(substrate, Zn alloy-plated; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RETABLE

Referenced Author (RAU)	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Kansai Paint Co Ltd	2001		JP 2001239517 A	HCPLUS	
Kansai Paint Co Ltd	2003		JP 200334713 A		
Nkk Corp	2001		JP 2001335965 A	HCPLUS	
Nkk Corp	2002		EP 129453 A1		
Nkk Corp	2002		WO 200192602 A1		
Nkk Corp	2002		JP 200253979 A		

L116 ANSWER 3 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN

AN 2003:671348 HCPLUS Full-text

DN 139:215906

TI Precoated steel plates having press moldability and corrosion resistance and production methods therefor

IN Tanaka, Yuichiro; Miyoshi, Tatsuya; Kawada, Akira; Okai, Kazuhisa; Matsuzaki, Akira; Yoshimi, Naoto; Kubota, Takahiro; Yamashita, Masaaki

PA JFE Steel Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 34 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

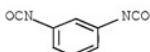
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003239081	A	20030827	JP 2002-38985	20020215 <--
JP 3982277	B2	20070926		
PRAI JP 2002-38985		20020215 <--		
AB Coating materials contain aqueous epoxy resin dispersion prepared from polyalkylene glycol-modified epoxy resins, other epoxy resins, H-containing hydrazine derivs., and other active H compds., silane coupling agents, phosphoric acid and/or hexafluoro metal acids, and coating materials on the top contain ≥2 solvent-type thermosetting resins having different glass transition temps., a solid lubricant (polyethylene), and nonchromium rustproofing agents. Thus, a bottom coating material on galvanized steel contained a reaction product of Epikote 834X90-polyethylene glycol-TDI copolymer with EP 1004 (an epoxy resin), 3-amino-1,2,4-triazole, and MF-K 60X 100, KBE 903 5, and H3PO4 40 parts.				
ICM C23C0028-00				
ICS B05D0005-00; C23C0022-07; C23C0022-34				
CC 42-10 (Coatings, Inks, and Related Products)				
Section cross-reference(s): 55, 56				
ST epoxy coating steel press molding corrosion resistance; polyoxyalkylene epoxy resin reaction product coating steel				
IT Polyesters, uses				
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP				

- (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (aliphatic, polymers with glycols and polyisocyanates; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Silanes
 RL: MOA (Modifier or additive use); USES (Uses)
 (amino; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Coating materials
 (anticorrosive; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Polyesters, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (aromatic, polymers with glycols and polyisocyanates; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Silanes
 RL: MOA (Modifier or additive use); USES (Uses)
 (coupling agents; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Silanes
 RL: MOA (Modifier or additive use); USES (Uses)
 (epoxy; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Coupling agents
 Crosslinking agents
 Lubricants
 (polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Phosphates, uses
 Thiols, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Galvanized steel
 RL: MSC (Miscellaneous)
 (polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Alloys, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Metals, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Polyurethanes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)

- (polyester-; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Polyurethanes, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyether-; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Molding
 (press; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Rust (iron oxide)
 RL: MOA (Modifier or additive use); USES (Uses)
 (proofing agents; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Polyoxyalkylenes, preparation
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (reaction products with epoxy resins; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Epoxy resins, preparation
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (reaction products with polyoxyalkylenes; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT Amines, uses
 Epoxides
 RL: MOA (Modifier or additive use); USES (Uses)
 (silyl; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT 9002-88-4, Luvax 1151
 RL: MOA (Modifier or additive use); USES (Uses)
 (Luvax 1151; polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT 61-82-5DP, 3-Amino-1,2,4-triazole, reaction products with epoxy resins and polyethylene glycol-modified epoxy resins 101-68-8DP, MDI, polymers with glycols and polyesters 107-88-0DP, 1,3-Butanediol, polymers with polyesters and polyisocyanates 110-63-4DP, 1,4-Butanediol, polymers with polyesters and polyisocyanates 4098-71-9DP, IPDI, polymers with glycols and polyesters 25068-38-6DP, EP 1004, reaction products with aminotriazole and polyethylene glycol-modified epoxy resins 92488-61-4DP, reaction products with aminotriazole and epoxy resins
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
- IT 92488-61-4F
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and

- corrosion resistance)
- IT 319-30-2, KBE 903 1760-24-3, KBM 603 2530-83-8
, KBM 403 2602-34-8, KBE 403 2857-60-1, KBM 402
3069-29-2, KBM 602 5089-72-5, KBE 603 7664-38-2
, Phosphoric acid, uses 7784-30-7, Aluminum phosphate 10043-83-1,
Magnesium phosphate 10124-54-6, Manganese phosphate 10381-36-9, Nickel
phosphate 12021-95-3, Hexafluorozirconic acid 13022-56-5
, KBM 903 16951-63-4, Hexafluorosilicic acid 17439-11-1
, Hexafluorotitanic acid 326588-96-9, MF K 60X
RL: MOA (Modifier or additive use); USES (Uses)
(polyalkylene glycol-modified epoxy resins containing silanes for coating
materials on steel plates having press moldability and
corrosion resistance)
- IT 12597-69-2, Steel, miscellaneous
RL: MSC (Miscellaneous)
(polyalkylene glycol-modified epoxy resins containing silanes for coating
materials on steel plates having press moldability and
corrosion resistance)
- IT 7429-90-5, Aluminum, uses 7440-66-6, Zinc, uses 7631-86-9, Silica,
uses 12609-49-3 52308-11-9 52360-06-2
58465-32-0 96539-23-0 112964-43-9
115253-85-5 116903-21-0 119412-76-9
209469-25-4
RL: TEM (Technical or engineered material use); USES (Uses)
(polyalkylene glycol-modified epoxy resins containing silanes for coating
materials on steel plates having press moldability and
corrosion resistance)
- IT 92488-61-4DP, reaction products with aminotriazole and epoxy
resins
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP
(Properties); TEM (Technical or engineered material use); PREP
(Preparation); USES (Uses)
(polyalkylene glycol-modified epoxy resins containing silanes for coating
materials on steel plates having press moldability and
corrosion resistance)
- RN 92488-61-4 HCPLUS
- CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-
(chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and
 α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)
- CM 1
- CRN 26471-62-5
- CMF C9 H6 N2 O2
- CCI IDS

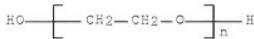


D1-Me

CM 2

CRN 25322-68-3

CMF (C₂ H₄ O)_n H₂ O
 CCI PMS



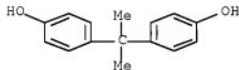
CM 3

CRN 106-89-8
 CMF C₃ H₅ Cl O



CM 4

CRN 80-05-7
 CMF C₁₅ H₁₆ O₂



IT 92488-61-4P

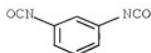
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
 (polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)

RN 92488-61-4 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and α-hydro-ω-hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

CM 1

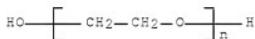
CRN 26471-62-5
 CMF C₉ H₆ N₂ O₂
 CCI IDS



D1-Me

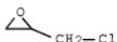
CM 2

CRN 25322-68-3
 CMF (C₂H₄O)_n H₂O
 CCI PMS



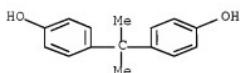
CM 3

CRN 106-89-8
 CMF C₃H₅O Cl



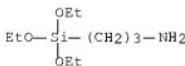
CM 4

CRN 80-05-7
 CMF C₁₅H₁₆O₂



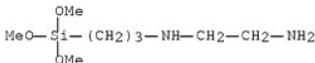
IT 919-30-2, KBE 903 1760-24-3, KBM 603 2530-33-8
 , KBM 403 2602-34-8, KBE 403 2897-60-1, KBM 402
 3069-29-2, KBM 602 5089-72-5, KBE 603 7664-38-2
 , Phosphoric acid, uses 12021-95-3, Hexafluorozirconic acid
 13822-56-5, KBM 903 16961-83-4, Hexafluorosilicic acid
 17439-11-1, Hexafluorotitanic acid
 RL: MOA (Modifier or additive use); USES (Uses)
 (polyalkylene glycol-modified epoxy resins containing silanes for coating
 materials on steel plates having press moldability and
 corrosion resistance)
 RN 919-30-2 HCPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (CA INDEX NAME)



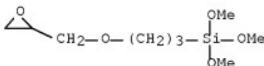
RN 1760-24-3 HCPLUS

CN 1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl]- (CA INDEX NAME)



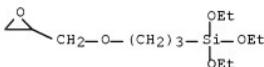
RN 2530-83-8 HCPLUS

CN Oxirane, 2-[{[3-(trimethoxysilyl)propoxy]methyl}- (CA INDEX NAME)



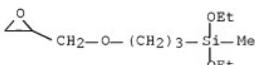
RN 2602-34-8 HCPLUS

CN Oxirane, 2-[{[3-(triethoxysilyl)propoxy]methyl}- (CA INDEX NAME)



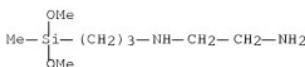
RN 2897-60-1 HCPLUS

CN Oxirane, 2-[{[3-(diethoxymethylsilyl)propoxy]methyl}- (CA INDEX NAME)

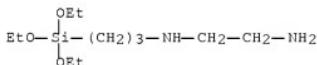


RN 3069-29-2 HCPLUS

CN 1,2-Ethanediamine, N1-[3-(dimethoxymethylsilyl)propyl]- (CA INDEX NAME)



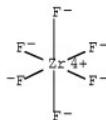
RN 5089-72-5 HCAPLUS
 CN 1,2-Ethanediamine, N1-[3-(triethoxysilyl)propyl]- (CA INDEX NAME)



RN 7664-38-2 HCAPLUS
 CN Phosphoric acid (CA INDEX NAME)

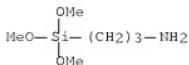


RN 12021-95-3 HCAPLUS
 CN Zirconate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)

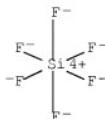


●2 H⁺

RN 13822-56-5 HCAPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)- (CA INDEX NAME)

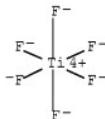


RN 16961-83-4 HCAPLUS
 CN Silicate(2-), hexafluoro-, hydrogen (1:2) (CA INDEX NAME)



●2 H+

RN 17439-11-1 HCPLUS
 CN Titanate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



●2 H+

IT 12597-69-2, Steel, miscellaneous
 RL: MSC (Miscellaneous)
 (polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
 RN 12597-69-2 HCPLUS
 CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
 IT 12609-49-3 52308-11-9 52360-06-2
 58465-32-0 96539-23-0 112964-43-9
 115253-85-5 116903-21-0 119412-76-9
 208469-25-4
 RL: TEM (Technical or engineered material use); USES (Uses)
 (polyalkylene glycol-modified epoxy resins containing silanes for coating materials on steel plates having press moldability and corrosion resistance)
 RN 12609-49-3 HCPLUS
 CN Aluminum alloy, base, Al 94, Si 6 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	94	7429-90-5
Si	6	7440-21-3

RN 52308-11-9 HCPLUS
 CN Aluminum alloy, base, Al 55, Zn 45 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	55	7429-90-5
Zn	45	7440-66-6

RN 52360-06-2 HCAPLUS
 CN Zinc alloy, base, Zn 88,Ni 12 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	88	7440-66-6
Ni	12	7440-02-0

RN 58465-32-0 HCAPLUS
 CN Zinc alloy, base, Zn 90,Fe 10 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	90	7440-66-6
Fe	10	7439-89-6

RN 96539-23-0 HCAPLUS
 CN Aluminum alloy, base, Al 70,Mn 30 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	70	7429-90-5
Mn	30	7439-96-5

RN 112964-43-9 HCAPLUS
 CN Zinc alloy, base, Zn 100,Mg 0.5 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	100	7440-66-6
Mg	0.5	7439-95-4

RN 115253-85-5 HCAPLUS
 CN Zinc alloy, base, Zn 100,Co 0.5 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	100	7440-66-6
Co	0.5	7440-48-4

RN 116903-21-0 HCAPLUS
 CN Magnesium alloy, base, Mg 94,Zn 5,Al 0.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Mg	94	7439-95-4
Zn	5	7440-66-6
Al	0.5	7429-90-5

RN 119412-76-9 HCAPLUS
 CN Zinc alloy, base, Zn 88,Cr 12 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	88	7440-66-6
Cr	12	7440-47-3

RN 208469-25-4 HCAPLUS
 CN Zinc alloy, base, Zn 91,Al 6,Mg 3 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	91	7440-66-6
Al	6	7429-90-5
Mg	3	7439-95-4

L116 ANSWER 4 OF 22 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:274972 HCAPLUS Full-text

DN 138:289090

TI Anticorrosive precoated steel sheets and manufacture thereof

IN Okai, Kazuhisa; Matsuzaki, Akira; Yoshimi, Naoto; Kubota, Takahiro;
 Yamashita, Masaaki; Noro, Hisato; Nakamichi, Jiro; Sato, Kaoru; Matsuki,
 Hiroyasu; Nishida, Reijiro; Murata, Masahiro

PA NKK Corp., Japan; Kansai Paint Co., Ltd.; JFE Steel Corp.

SO Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2003105554	A	20030409	JP 2002-214579	20020723 <--
	JP 3665046	B2	20050629		
	WO 2004009870	A1	20040129	WO 2003-JP1531	20030214 <--
	W: CN, KR, US				
	RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,				
	IT, LU, MC, NL, PT, SE, SI, SK, TR				
	EP 1524332	A1	20050420	EP 2003-705145	20030214 <--
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				
	IE, SI, FI, CY, TR, BG, CZ, EE, HU, SK				
	CN 1671885	A	20050921	CN 2003-817687	20030214 <--
	TW 259216	B	20060801	TW 2003-92103114	20030214 <--
	US 2005147832	A1	20050707	US 2005-515303	20050124 <--
	JP 2005206947	A	20050804	JP 2005-29983	20050207 <--
PRAI	JP 2001-220912	A	20010723	<--	
	JP 2002-214579	A	20020723	<--	
	WO 2003-JP1531	W	20030214	<--	
AB	Chromium-free coating compns. containing (a) water-dispersible and/or water-soluble resins which are reaction products of epoxy-containing resins and active H-containing compds. comprising hydrazine derivs., (b) silane coupling agents, and (c) H3PO4 and/or hexafluorometal acids (e.g., H2SiF6, H2TiF6) are applied on galvanized steel or aluminum-plated steel sheets to give a monolayer anticorrosive coating having a thickness of 0.02-5 µm.				
IC	ICM C23C0022-36				
	ICS C23C0022-00; C23C0022-42; C23C0028-00				

- CC 42-9 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55
- ST hydrazine epoxy resin reaction product anticorrosive coating steel sheet; silane coupling agent anticorrosive coating steel; hexafluoro metal acid anticorrosive coating steel
- IT Coating materials
 (anticorrosive, water-thinned; chromium-free anticorrosive coatings for plated steel sheets)
- IT Corrosion inhibitors
 (chromium-free anticorrosive coatings for plated steel sheets)
- IT Galvanized steel
 RL: MSC (Miscellaneous)
 (chromium-free anticorrosive coatings for plated steel sheets)
- IT Polyurethanes, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (epoxy-polyoxyalkylene-, reaction products with hydrazine derivs.; chromium-free anticorrosive coatings for plated steel sheets)
- IT Polyoxoalkylenes, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (epoxy-polyurethane-, reaction products with hydrazine derivs.; chromium-free anticorrosive coatings for plated steel sheets)
- IT Epoxy resins, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyoxyalkylene-polyurethane-, reaction products with hydrazine derivs.; chromium-free anticorrosive coatings for plated steel sheets)
- IT Epoxy resins, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (reaction products, with hydrazine derivs.; chromium-free anticorrosive coatings for plated steel sheets)
- IT Coupling agents
 (silane; chromium-free anticorrosive coatings for plated steel sheets)
- IT 1C97-69-2, Steel, miscellaneous
 RL: MSC (Miscellaneous)
 (aluminum-plated; chromium-free anticorrosive coatings for plated steel sheets)
- IT 61-82-5DP, 3-Amino-1,2,4-triazole, reaction products with epoxy resins 507271-32-1DP, Epikote 834X90-Duranate MF-K 60X-polyethylene glycol-TDI copolymer, reaction products with 3-amino-1,2,4-triazole
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (chromium-free anticorrosive coatings for plated steel sheets)
- IT 302-01-2D, Hydrazine, derivs., reaction products with epoxy resins 7664-38-2, Phosphoric acid, uses 7784-30-7, Aluminum phosphate 10043-83-1, Magnesium phosphate 10124-54-6, Manganese phosphate 10381-36-9, Nickel phosphate 12021-95-3 16961-83-4, Hexafluorosilicic acid 17439-11-1, Hexafluorotitanic acid
 RL: TEM (Technical or engineered material use); USES (Uses)
 (chromium-free anticorrosive coatings for plated steel sheets)
- IT 7631-86-9, Fumed silica, uses
 RL: TEM (Technical or engineered material use); USES (Uses)

(colloidal, corrosion inhibitor; chromium-free anticorrosive coatings for plated steel sheets)

IT 97-77-8, Tetraethylthiram disulfide 13939-25-8, Aluminum dihydrogen triphosphate 139638-76-5, Aluminum phosphomolybdate
RL: TEM (Technical or engineered material use); USES (Uses)
(corrosion inhibitor; chromium-free anticorrosive coatings for plated steel sheets)

IT 919-30-2, KBE 903 1760-24-3, KBE 603 2530-83-8
, KBM 403 2602-34-8, KBE 403 2897-60-1, KBE 402
3069-29-2, KBM 602 5089-72-5, KBE 603 13822-56-5
, KBM 903
RL: TEM (Technical or engineered material use); USES (Uses)
(coupling agents; chromium-free anticorrosive coatings for plated steel sheets)

IT 12597-69-2, Steel, miscellaneous
RL: MSC (Miscellaneous)
(aluminum-plated; chromium-free anticorrosive coatings for plated steel sheets)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 507271-32-1DP, Epikote 834X90-Duranate MF-K 60X-polyethylene glycol-TDI copolymer, reaction products with 3-amino-1,2,4-triazole
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(chromium-free anticorrosive coatings for plated steel sheets)

RN 507271-32-1 HCPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene, Duranate MF-K 60X and α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

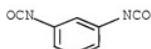
CM 1

CRN 199876-59-0
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

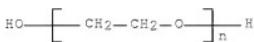
CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1-Me

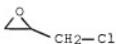
CM 3

CRN 25322-68-3
 CMF (C₂H₄O)_nH₂O
 CCI PMS



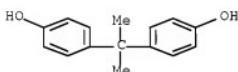
CM 4

CRN 106-89-8
 CMF C₃H₅ClO



CM 5

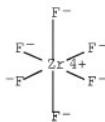
CRN 80-05-7
 CMF C₁₅H₁₆O₂



IT 7664-38-2, Phosphoric acid, uses 12021-95-3
 16961-83-4, Hexafluorosilicic acid 17439-11-1,
 Hexafluorotitanic acid
 RL: TEM (Technical or engineered material use); USES (Uses)
 (chromium-free anticorrosive coatings for plated steel
 sheets)
 RN 7664-38-2 HCPLUS
 CN Phosphoric acid (CA INDEX NAME)



RN 12021-95-3 HCPLUS
 CN Zirconate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



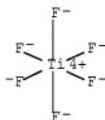
●2 H⁺

RN 16961-83-4 HCPLUS
 CN Silicate(2-), hexafluoro-, hydrogen (1:2) (CA INDEX NAME)



●2 H⁺

RN 17439-11-1 HCPLUS
 CN Titanate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



●2 H⁺

IT 130638-76-5, Aluminum phosphomolybdate
 RL: TEM (Technical or engineered material use); USES (Uses)
 (corrosion inhibitor; chromium-free anticorrosive coatings for plated
 steel sheets)
 RN 130638-76-5 HCPLUS
 CN Aluminum molybdenum hydroxide oxide phosphate (CA INDEX NAME)

Component	Ratio	Component	
		Registry Number	
O	x	17778-80-2	
HO	x	14280-30-9	
O ₄ P	x	14265-44-2	
Mo	x	7439-98-7	

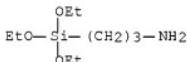
Al | x | 7429-90-5

IT 919-30-2, KBE 903 1760-24-3, KBM 603 2530-83-8
, KBM 403 2602-34-8, KBE 403 2897-60-1, KBE 402
3069-29-2, KBM 602 5089-72-5, KBE 603 13822-56-5
. KBM 903

RL: TEM (Technical or engineered material use); USES (Uses)
(coupling agents; chromium-free anticorrosive coatings for plated
steel sheets)

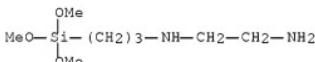
BN 919-30-2 HCAPLUS

CN 1-Propanamine, 3-(triethoxysilyl)- (CA INDEX NAME)



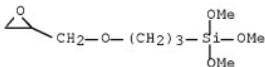
RN 1760-24-3 HCAPLUS

CN 1,2-Ethanediamine, N1-[3-(trimethoxysilyl)propyl- (CA INDEX NAME)



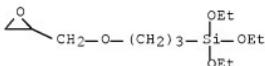
RN 2530-83-8 HCAPLUS

CN Oxirane, 2-[[3-(trimethoxysilyl)propoxy]methyl]- (CA INDEX NAME)



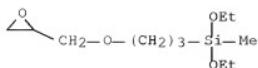
BN 2602-34-8 HCAPLUS

CN Oxirane, 2-[1-[3-(triethoxysilyl)propoxylmethyl]- (CA INDEX NAME)

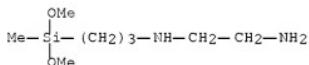


RN 2897-60-1 HCAPLUS

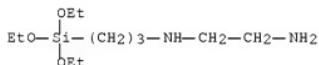
CN Oxirane, 2-[(3-(diethoxymethylsilyl)propoxy)methyl]- (CA INDEX NAME)



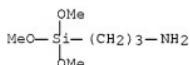
RN 3069-29-2 HCPLUS
 CN 1,2-Ethanediamine, N1-[3-(dimethoxymethylsilyl)propyl]- (CA INDEX NAME)



RN 5089-72-5 HCPLUS
 CN 1,2-Ethanediamine, N1-[3-(triethoxysilyl)propyl]- (CA INDEX NAME)



RN 13822-56-5 HCPLUS
 CN 1-Propanamine, 3-(trimethoxysilyl)- (CA INDEX NAME)

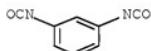


L116 ANSWER 5 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 2001:644615 HCPLUS Full-text
 DN 135:196975
 TI Epoxy resin emulsions and their weather-resistant water-based coatings
 IN Noda, Sumio; Nishida, Reijiro
 PA Kansai Paint Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001240727	A	20010904	JP 2000-55306	20000301 <--
PRAI JP 2000-55306		20000301	<--	
AB	The aqueous emulsions, useful for construction sealants, etc., comprise acryl-modified epoxy resins and emulsifier resins that are prepared from polyethylene glycol (I; Mn 400-20,000), bisphenol-base epoxy resins, compds.			

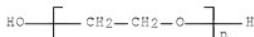
having an active H in a mol., and polyisocyanates. Thus, I (Mn 4000), bisphenol A epoxy resin (Epikote 828), TDI, and propylene glycol monomethyl ether were reacted, mixed with bisphenol A epoxy resin-acrylic acid-hydroxyethyl acrylate-Me methacrylate-styrene copolymer in H₂O, further mixed with pigments and an amine crosslinker (Epolsion EB 1), and applied on a slate board to give a coating showing good water resistance.

- ICM C08L0063-02
 ICS C08F0002-44; C08F0283-10; C08G0059-40; C08G0059-50; C08G0059-62;
 C08J0003-02; C08L0033-00; C08L0063-10; C09D0005-02; C09D0151-08;
 C09D0163-02; C09D0163-10; C09K0003-10
- CC 42-10 (Coatings, Inks, and Related Products)
 IT 1320-67-8DP, Propylene glycol monomethyl ether, blocking
 epoxy-polyoxyalkylene-polyurethanes 92488-61-4DP, Epikote
 828-polyethylene glycol-TDI copolymer, blocked with propylene glycol
 monomethyl ether
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (emulsifier; weather-resistant water-based epoxy resin emulsion
 coatings)
 IT 92488-61-4DP, Epikote 828-polyethylene glycol-TDI copolymer,
 blocked with propylene glycol monomethyl ether
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (emulsifier; weather-resistant water-based epoxy resin emulsion
 coatings)
 RN 92488-61-4 HCAPLUS
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-
 (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and
 α-hydro-ω-hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)
- CM 1
- CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS

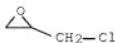


D1-Me

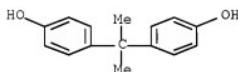
- CM 2
- CRN 25322-68-3
 CMF (C2 H4 O)n H2 O
 CCI PMS



CM 3

CRN 106-89-8
CMF C3 H5 Cl O

CM 4

CRN 80-05-7
CMF C15 H16 O2

L116 ANSWER 6 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN

AN 2001:644542 HCPLUS Full-text

DN 135:212389

TI Manufacture of inorganic articles coated with water-based sealers having improved weather resistance and flexibility

IN Inada, Yuichi; Morimoto, Kazuhiro; Miyazaki, Takashi; Shinohara, Masaaki; Noda, Sumio; Nishida, Reijiro

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

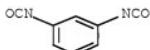
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001239517	A	20010904	JP 2000-55307	20000301 <-
PRAI JP 2000-55307		20000301	<-	

AB The materials for building walls, roof tiles, etc., are manufactured by forming inorg. materials, aging the formed articles, and coating the articles with water-based sealer compns. containing (I) aqueous emulsions consisting of (A) dispersion stabilizers of modified epoxy resins obtained by reacting polyethylene glycol having number-average mol. weight (Mn) 400-20,000 with bisphenol epoxy resins, compds. having one active H, and compds. having ≥2 active isocyanates and (B) acrylic-modified epoxy resins and (II) amine hardeners. Thus, a stabilizer resin [prepared from polyethylene glycol (Mn 4000), propylene glycol monomethyl ether, Epikote 828 (bisphenol A epoxy resin), and TDI] was mixed with a modified resin (prepared from Epikote 828, acrylic acid, styrene, Me methacrylate, and hydroxyethyl acrylate) and water to give an emulsion, which was stirred with a pigment paste and Epolsion EB 1 (amine hardener) to give a coating composition. A slate plate was coated with the composition to give a test piece showing water permeability ≤1 mL/24 h,

cross-cut adhesion 25/25, and high discoloration resistance in weathering test.

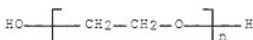
- IC ICM B28B0011-04
 ICS C09D0005-00; C09D0005-02; C09D0163-00; C09D0163-10; C09D0171-00
 CC 42-9 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 58
 IT 92488-61-4, Epikote 828-polyethylene glycol-TDI copolymer
 RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (dispersions stabilizers, blocked; manufacture of inorg. articles coated with
 water-based epoxy resin sealers having improved weather resistance and flexibility for building materials)
 IT 92488-61-4, Epikote 828-polyethylene glycol-TDI copolymer
 RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)
 (dispersions stabilizers, blocked; manufacture of inorg. articles coated with
 water-based epoxy resin sealers having improved weather resistance and flexibility for building materials)
 RN 92488-61-4 HCPLUS
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)
- CM 1
 CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



D1-Me

CM 2

CRN 25322-68-3
 CMF (C2 H4 O)n H2 O
 CCI PMS

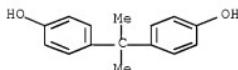


CM 3

CRN 106-89-8
 CMF C3 H5 Cl O



CM 4

CRN 80-05-7
CMF C15 H16 O2

L116 ANSWER 7 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN

AN 2000:560935 HCPLUS Full-text

DN 133:165222

TI Water-thinned anticorrosive coating compositions with long pot life and excellent curability and water resistance

IN Sawada, Eisuke; Nakano, Tadashi; Iida, Shinji; Tomita, Kenichi

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000226537	A	20000815	JP 1999-28820	19990205 <--
PRAI JP 1999-28820		19990205	<--	

AB The compns. comprise (A) aqueous emulsions of epoxy resins with epoxy equivalent 100-1000 prepared by using dispersion stabilizers of modified epoxy resins prepared by reaction of polyethylene glycol (Mn 400-20,000), bisphenol-type epoxy resins, compds. having 1 active H in a mol., and compds. having ≥2 active isocyanate groups in a mol., (B) CO₂-containing amine hardeners, and optionally flash rust inhibitors. Thus, polyethylene glycol (Mn 4000) 600, propylene glycol mono-Me ether (I) 13.5, and Epikote 828 (II; epoxy equivalent 190) 380 g were mixed, treated with 52.2 g TDI to NCO value ≤0.5, and diluted with 117 g I to give a dispersion stabilizer resin, 35 parts of which was blended with 65 parts II and emulsified with 100 parts H₂O to give a 50% epoxy resin emulsion. A coating main agent comprising the emulsion 47, Ti white 13, talc 22.85, dispersant 1, defoamer 0.1, antiseptic 0.05, and H₂O 16 parts was mixed 88:12 with Ancamide 365 (modified polyamide amine containing CO₂), applied on a steel sheet, and dried at 20° and relative humidity 65% for 7 days to form a coating showing excellent corrosion and water resistance.

IC ICM C09D0005-02

ICS C09D0005-00; C09D0163-02; C08G0059-50

CC 42-9 (Coatings, Inks, and Related Products)
Section cross-reference(s): 55

IT 1320-67-8DP, Propylene glycol monomethyl ether, reaction products with modified epoxy resins 92488-61-4DP, Epikote 828-polyethylene

glycol-TDI copolymer, reaction products with propylene glycol mono-Me ether 107339-11-7DP, Epikote 828-isophorone diisocyanate-polyethylene glycol copolymer, reaction products with propylene glycol mono-Me ether
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(dispersion stabilizer; water-thinned anticorrosive epoxy resin coating compns. with long pot life and good curability and water resistance)

IT 12597-59-2, Steel, miscellaneous

RL: MSC (Miscellaneous)

(water-thinned anticorrosive epoxy resin coating compns. with long pot life and good curability and water resistance)

IT 93488-61-4DP, Epikote 828-polyethylene glycol-TDI copolymer, reaction products with propylene glycol mono-Me ether

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)

(dispersion stabilizer; water-thinned anticorrosive epoxy resin coating compns. with long pot life and good curability and water resistance)

RN 92448-61-4 HCPLUS

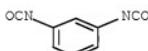
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



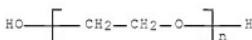
D1-Me

CM 2

CRN 25322-68-3

CMF (C2 H4 O)n H2 O

CCI PMS



CM 3

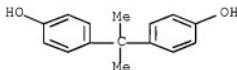
CRN 106-89-8

CMF C3 H5 Cl O



CM 4

CRN 80-05-7
 CMF C15 H16 O2



IT 12597-69-2, Steel, miscellaneous
 RL: MSC (Miscellaneous)
 (water-thinned anticorrosive epoxy resin coating compns. with long pot life and good durability and water resistance)
 RN 12597-69-2 HCPLUS
 CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L116 ANSWER 8 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 1999:679796 HCPLUS Full-text

DN 131:311755

TI Coating methods for aluminum fins having water-slipping coatings

IN Haruda, Yasuhiko; Morimoto, Koutaro

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11290776	A	19991026	JP 1998-97685	19980409 <--
PRAI JP 1998-97685		19980409		

AB Aluminum is coated with a primer and a coating containing a reaction product (I) of an OH-containing fluoropolymer with an epoxy-terminated polysiloxane and ≥ 1 crosslinking agent, namely an optionally blocked polyisocyanate and a melamine resin. In the presence of a sulfonic acid compound, I is prepared at epoxy group-OH group equivalent ratio 1:0.05-1:0.8. Thus, a coating contained a reaction product of Lumiflon LF 600 with dimethylpolysiloxane terminated with tri-Me silyl group and γ -glycidoxypyropyltrimethylsilyl group and Takenate D 160N.

IC ICM B05D0007-24

ICS B05D0005-00; C09D0005-00; C09D0127-12; F28F0019-04

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 56

IT 37321-70-3, A1050

RL: TEM (Technical or engineered material use); USES (Uses)
 (A1050; water-slipping coatings containing hydroxy fluoropolymer-epoxy

polysiloxane reaction products and crosslinking agents for aluminum fins)

IT 81546-24-9P 237743-49-6P 247223-93-4P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(primers; water-slipping coatings containing hydroxy fluoropolymer-epoxy polysiloxane reaction products and crosslinking agents for aluminum fins)

IT 37321-70-3, A1050

RL: TEM (Technical or engineered material use); USES (Uses)

(A1050; water-slipping coatings containing hydroxy fluoropolymer-epoxy polysiloxane reaction products and crosslinking agents for aluminum fins)

RN 37321-70-3 HCPLUS

CN Aluminum alloy, base, Al 99.50-100, Fe 0-0.40, Si 0-0.25, Cu 0-0.05, Mg 0-0.05, Mn 0-0.05, V 0-0.05, Zn 0-0.05, Ti 0-0.03 (AA 1050) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	99.50 - 100	7429-90-5
Fe	0 - 0.40	7439-89-6
Si	0 - 0.25	7440-21-3
Cu	0 - 0.05	7440-50-8
Mg	0 - 0.05	7439-95-4
Mn	0 - 0.05	7439-96-5
V	0 - 0.05	7440-62-2
Zn	0 - 0.05	7440-66-6
Ti	0 - 0.03	7440-32-6

IT 247223-93-4P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(primers; water-slipping coatings containing hydroxy fluoropolymer-epoxy polysiloxane reaction products and crosslinking agents for aluminum fins)

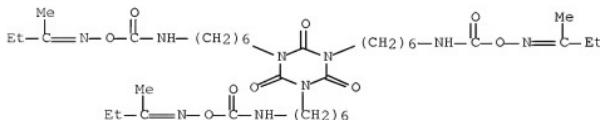
RN 247223-93-4 HCPLUS

CN 1,3,5-Triazine-2,4,6(1H,3H,5H)-trione, 1,3,5-tris[6-[[[[1-(1-methylpropylidene)amino]oxylcarbonyl]amino]hexyl]-, polymer with 2-(chloromethyl)oxirane and 4,4'-(1-methylethyldiene)bis[phenol] (CA INDEX NAME)

CM 1

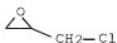
CRN 93919-05-2

CMF C36 H63 N9 O9



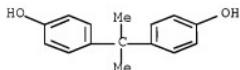
CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7
 CMF C15 H16 O2



L116 ANSWER 9 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 1998:307154 HCPLUS Full-text

DN 129:57089

TI Automobile preprimed steel sheet with excellent corrosion resistance, workability, and weldability

IN Yoshimi, Naoto; Urata, Kazuya; Yamashita, Masaaki

PA Nippon Kokan Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10128906	A	19980519	JP 1996-303569	19961029 <--
JP 3271237	B2	20020402		

PRAI JP 1996-303569 19961029 <--

AB The steel sheet is a galvanized steel sheet, (1) the outside surface of which has a chromate coating containing 1-500 mg/m² Cr and an elec. conductive polymer coating with volume intrinsic resistivity $\leq 1 \Omega\text{cm}$, kinetic friction coefficient with no oil applied 0.03-0.30, pencil hardness 3B-5H, and thickness 2.0-30 μm and (2) the inside surface of which has the chromate coating and an insulating polymer coating with volume intrinsic resistivity $> 1 \Omega\text{cm}$ and thickness 0.1-3.0 μm . The steel sheet, useful for automobile bodies and parts, shows excellent powdering resistance, weldability, press workability, inside surface properties (pitting resistance, etc.), and outside surface properties after painting (paint adhesion, corrosion resistance, etc.).

IC ICM B32B0015-08
 ICS B05D0007-14; B62D0029-00; C23C0022-82; C23C0028-00

CC 55-6 (Ferrous Metals and Alloys)

ST automobile preprimed steel sheet polymer coating; galvanized steel preprimed chromate polymer coating

- IT Galvanized steel
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT Automobiles
 - (bodies; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT Coating materials
 - (chromate; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT Acrylic polymers, uses
 - Epoxy resins, uses
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (coating, containing corrosion inhibitor; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT Silica gel, uses
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (corrosion inhibitor, polymer coating containing; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT Fluoropolymers, uses
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (lubricant, polymer coating containing; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT Automobiles
 - (parts; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT Corrosion inhibitors
 - Electric conductors
 - (polymer coating containing; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT Lubricants
 - (solid, polymer coating containing; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT 53570-70-0, Acrydlic A 405 134291-65-9 172867-70-8D, Duranate MF-B, block copolymer with amine-modified epoxy resin 183449-65-2, Epokey 834
 - RL: TEM (Technical or engineered material use); USES (Uses)
 - (coating, containing corrosion inhibitor; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT 7631-86-9, Aerosil R 811, uses 7789-06-2, Strontium chromate 10294-40-3, Barium chromate
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (corrosion inhibitor, polymer coating containing; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT 9002-84-0, Fluon L 155J 9002-88-4, Ceridust 3620
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (lubricant, polymer coating containing; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)
- IT 7440-02-0, Nickel, uses 12597-68-1, Stainless steel, uses 12751-22-3, Iron phosphide 25583-20-4, Titanium nitride
 - RL: MOA (Modifier or additive use); USES (Uses)
 - (powders, polymer coating containing; automobile preprimed steel

sheet with coating for excellent corrosion resistance and workability and weldability)

IT 134291-65-9

RL: TEM (Technical or engineered material use); USES (Uses)
 (coating, containing corrosion inhibitor; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)

RN 134291-65-9 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and Takenate B 870N (CA INDEX NAME)

CM 1

CRN 124671-40-5

CMF Unspecified

CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8

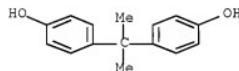
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



IT 12597-68-1, Stainless steel, uses

RL: MOA (Modifier or additive use); USES (Uses)
 (powders, polymer coating containing; automobile preprimed steel sheet with coating for excellent corrosion resistance and workability and weldability)

RN 12597-68-1 HCAPLUS

CN Stainless steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L116 ANSWER 10 OF 22 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1998:115749 HCAPLUS Full-text

DN 128:205992

TI Anticorrosive weldable preprimed steel plates with excellent

powdering resistance and coatability

IN Yoshimi, Naoto; Urata, Kasuya; Yamashita, Masaaki; Haruda, Yasuhiko
 PA Nippon Kokan Co., Ltd., Japan; Kansai Paint Co., Ltd.
 SO Jpn. Kokai Tokkyo Koho, 30 pp.

CODEN: JKXXAF

DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10043677	A	19980217	JP 1996-223036	19960806 <--
PRAI JP 1996-223036		19960806		<--

AB Zinc-plated steel plates for automobile bodies are imparted a chromate layer then a 1.0-30 µm-thick layer of compns. from (A) a base resin comprising 100 parts epoxy resins, modified epoxy resins, and/or polyhydroxy polyether resins and 5-80 parts isocyanate compds., (B) corrosion-preventing additives chosen from silica and water-insol. chromate salts at A/B = 99/1~50/50; (C) solid lubricants in an amount of 0.1-30 part to 100 parts A + B and B/20 ≤ C ≤ B + 20; and (D) elec. conductive additives chosen from metals and alloys, elec. conductive carbon, iron phosphide, carbides, nitrides, and semiconductive oxides at 5 ≤ [D/(A + B + C + D)] × 100 ≤ 70 in volume% based on the film-forming solids. A coating comprised Phenox Tohoto YP-50 100, MIBK oxime-blocked IPDI 5, and dibutyltin dilaurate 0.2 part.

IC ICM B05D0007-14
 ICS B05D0007-24; B32B0015-08; B32B0027-18; B32B0027-20; B32B0027-24;
 C23C0028-00

CC 42-10 (Coatings, Inks, and Related Products)

ST epoxy coating isocyanate hardener anticorrosive steel; automobile body anticorrosive steel plate; galvanized chromated anticorrosive steel plate

IT Fluoropolymers, uses

RL: MOA (Modifier or additive use); USES (Uses)
 (Teflon MP 1100; anticorrosive weldable preprimed steel plates with excellent powdering resistance and coatability)

IT Corrosion inhibitors

Electric conductors

Lubricants

(anticorrosive weldable preprimed steel plates with excellent powdering resistance and coatability)

IT Silica gel, uses

RL: MOA (Modifier or additive use); USES (Uses)
 (anticorrosive weldable preprimed steel plates with excellent powdering resistance and coatability)

IT Galvanized steel

RL: PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
 (anticorrosive weldable preprimed steel plates with excellent powdering resistance and coatability)

IT Coating materials

(anticorrosive; anticorrosive weldable preprimed steel plates with excellent powdering resistance and coatability)

IT Automobiles

(bodies; anticorrosive weldable preprimed steel plates with excellent powdering resistance and coatability)

IT Polyurethanes, uses

Polyurethanes, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (epoxy; anticorrosive weldable preprimed steel plates with

excellent powdering resistance and coatability)

IT Epoxy resins, uses
Epoxy resins, uses
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyurethane; anticorrosive weldable preprimed steel plates with excellent powdering resistance and coatability)

IT 9002-84-0, PTFE
RL: MOA (Modifier or additive use); USES (Uses)
(Teflon MP 1100; anticorrosive weldable preprimed steel plates with excellent powdering resistance and coatability)

IT 111-42-2DP, Diethanolamine, cationic epoxy resins, uses 115-77-5DP, Pentaerythritol, cationic epoxy resins 141-43-5DP, Monoethanolamine, cationic epoxy resins, uses 4098-71-9DP, IPDI, cationic epoxy resins 85305-25-5DP, Dipropanolamine, cationic epoxy resins 124671-40-5DP, Takenate B-870N, cationic epoxy resins 133988-63-3P 134291-65-9P 134498-50-3DP, Duranate TPA 100, cationic epoxy resins 174514-92-2DP, Duranate MF-B80M, cationic epoxy resins 184015-78-9P 184015-79-0P 184015-80-3P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (anticorrosive weldable preprimed steel plates with excellent powdering resistance and coatability)

IT 1317-33-5, Molykote Z, uses 7429-90-5, Aluminum, uses 7440-02-0, Nickel, uses 7440-66-6, Zinc, uses 7631-86-9, Aerosil 200, uses 7782-42-5, Graphite, uses 7789-06-2, Strontium chromate 9002-88-4, Luvax 115 10294-40-3, Barium chromate 12070-08-5, Titanium carbide 12433-50-0, ZPC 12751-22-3, Iron phosphide 13765-19-0, Calcium chromate 25583-20-4, Titanium nitride 49663-84-5, ZTO 77466-62-7, Shieldex 84135-65-9, Finesil T-32 109944-58-3, Aerosil R202 112153-70-5, Aerosil R805 139351-18-1, Aerosil R974 139920-08-4, Tin titanium oxide
RL: MOA (Modifier or additive use); USES (Uses)
(anticorrosive weldable preprimed steel plates with excellent powdering resistance and coatability)

IT 134291-65-9P 184015-80-3P
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (anticorrosive weldable preprimed steel plates with excellent powdering resistance and coatability)

RN 134291-65-9 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and Takenate B 870N (CA INDEX NAME)

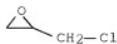
CM 1

CRN 124671-40-5
CMF Unspecified
CCI MAN

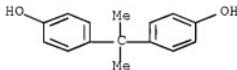
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8
CMF C3 H5 Cl O



CM 3

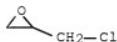
CRN 80-05-7
CMF C15 H16 O2RN 184015-80-3 HCPLUS
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and Duranate MF-B 80M (CA INDEX NAME)

CM 1

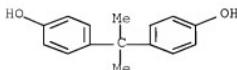
CRN 174514-92-2
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

IT 12433-50-0, ZPC 49663-84-5, ZTO

RL: MOA (Modifier or additive use); USES (Uses)
 (anticorrosive weldable prepainted steel plates with excellent
 powdering resistance and coatability)

RN 12433-50-0 HCPLUS

CN Potassium zinc chromate oxide (K₂Zn₄(CrO₄)₄O) (CA INDEX NAME)

Component	Ratio	Component	
			Registry Number
O	1		17778-80-2
CrO ₄	4		13907-45-4
Zn	4		7440-66-6
K	2		7440-09-7

RN 49663-84-5 HCPLUS

CN Zinc chromate hydroxide (Zn₅(CrO₄)(OH)₈) (CA INDEX NAME)

Component	Ratio	Component	
			Registry Number
HO	8		14280-30-9
CrO ₄	1		13907-45-4
Zn	5		7440-66-6

L116 ANSWER 11 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1997:618910 HCPLUS [Full-text](#)

DN 127:279347

TI Aqueous epoxy resin compositions with long pot life for adhesives and coatings

IN Sawada, Hidenori; Tomita, Kenichi; Shimada, Shinichi; Hamamura, Toshihiro; Nakaya, Toshikazu; Nishida, Reijiro

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

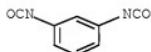
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09241482	A	19970916	JP 1996-56512	19960313 <--
	JP 3720899	20051130		
PRAI	JP 1996-56512	19960313	<--	
AB	Title compns. comprise (I) aqueous epoxy hardeners containing (A) amine-modified epoxy resins prepared from polyethylene glycol [I; number-average mol. weight (Mn) 400-20,000], bisphenol-type epoxy resins, compds. having 1 active H (/mol.), compds. having ≥2 active NCO (/mol.), and active-H-containing amines, (B) active-H-containing hydrophobic polyamines, and (II) epoxy resin aqueous dispersions. Thus, 0.15 mol I (Mn 4,000) was treated with 0.15 mol propylene glycol monomethyl ether (II) 1 mol Epikote 828 at 100° and then with 0.3 mol TDI at 120° to NCO index ≤0.5, diluted with II to give an epoxy resin (E1), which was modified with 1.738 mol Pr2NH to give A, while 35 parts E1 was blended with 65 parts Epikote 828 and 100 parts H2O to give a dispersion (II-1). Then, 34 parts 30:70:100 (%) A/Epicure H 55 (polyamine)/H2O was blended with 66 parts II-1 to give title composition, which was applied on a soft steel plate and dried to give a coating film showing no corrosion nor blisters in salt spray test (JIS Z 2371), gel fraction ≥71 % in 24-h immersion in 20° THF, and excellent resistance in DuPont falling weight impact test.			

IC ICM C08L0063-00
 ICS C08G0059-14; C09D0163-00
 CC 38-3 (Plastics Fabrication and Uses)
 Section cross-reference(s): 42
 IT 92488-61-4P 196791-35-2P 196791-36-3P 196791-37-4P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (hardener; aqueous epoxy resin compns. containing amine-modified epoxy hardeners with long pot life)
 IT 92488-61-4P
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (hardener; aqueous epoxy resin compns. containing amine-modified epoxy hardeners with long pot life)
 RN 92488-61-4 HCAPLUS
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

CM 1

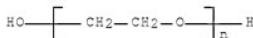
CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



D1-Me

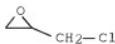
CM 2

CRN 25322-68-3
 CMF (C2 H4 O)n H2 O
 CCI PMS

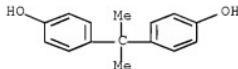


CM 3

CRN 106-89-8
 CMF C3 H5 Cl O



CM 4

CRN 80-05-7
CMF C15 H16 O2

L116 ANSWER 12 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1997:107263 HCPLUS Full-text

DN 126:119149

TI Anticorrosive and press-moldable organic composite-coated steel panels

IN Urata, Kazuya; Yoshimi, Naoto; Kubota, Takahiro; Yamashita, Masaaki; Sato, Kentaro; Haruta, Yasuhiko

PA Nippon Kokan Kk, Japan; Kansai Paint Co Ltd

SO Jpn. Kokai Tokkyo Koho, 55 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08318218	A	19961203	JP 1996-60130	19960222 <--
JP 3228675	B2	20011112		

PRAI JP 1995-86313 A 19950317 <--

AB Title panels are prepared by forming chromate films on Zn (alloy)-plated steel panels (A) to a Cr thickness of 5-200 mg/m² and covering with organic compns. containing 3-50% anticorrosive agents and 30-80% polymers consisting of 100 parts OH- or COOH-containing base polymers (excluding epoxy resins end modified by basic N and ≥2 primary OH groups) and 5-80 parts polyisocyanates to a thickness of between 3.0 μm and 0.1 + (Ra + 2) (Ra = average roughness of the A panels). A Ni/Zn alloy-plated steel panel with a Ra 1.0 μm was chromated to a 50-μm Cr, covered with a composition containing a Sn catalyst, 100 parts Epikote 1007, 25 parts Duranate MF-B 80M (blocked hexafunctional derivative of HMDI), polyethylene wax, BaCrO₄, and SrCrO₄ to a 0.8-μm thickness, and baked at 140° to form a plate showing good coating adhesion, anticorrosion, lubricity, processability, and powdering resistance.

ICM B05D0007-14

ICS B05D0003-10; B05D0007-24; B32B0015-08; C23C0022-24; C23C0028-00

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55

ST processability epoxy coating chromated zinc steel; anticorrosion epoxy coating chromated zinc steel; acrylic acid resin coating chromated steel; zinc alloy plated steel coating processability

- IT Lubricants
 (anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT Epoxy resins, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT Galvanized steel
 RL: TEM (Technical or engineered material use); USES (Uses)
 (anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT Chromates
 RL: MOA (Modifier or additive use); USES (Uses)
 (anticorrosive filler; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT Coating materials
 (anticorrosive; hydroxy- or carboxy-containing resin coatings on chromated and zinc alloy-plated steel)
- IT Fluoropolymers, uses
 RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES (Uses)
 (blend with polyethylene, lubricant; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT Acrylic polymers, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (carboxy-containing; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT Corrosion inhibitors
 (insol. chromates; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT Fluoropolymers, uses
 RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES (Uses)
 (lubricant; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT Polyoxalkylenes, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (monoethers, lubricant; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT 184015-77-8P 184015-78-9P 184015-80-3P 184915-48-8P
 185914-53-8P 185914-54-9P 185914-55-0P 185914-56-1P 185914-57-2P
 185914-58-3P 185914-59-4P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT 12597-69-2, Steel, miscellaneous
 RL: MSC (Miscellaneous)
 (anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT 52360-06-2 68893-54-9 118889-49-9
 119412-76-9 152259-57-9
 RL: TEM (Technical or engineered material use); USES (Uses)
 (anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT 7789-06-2, Strontium chromate 10294-40-3, Barium chromate 13530-65-9,
 Zinc chromate 13765-19-0, Calcium chromate 41189-36-0, Potassium zinc chromate

- RL: MOA (Modifier or additive use); USES (Uses)
 (anticorrosive filler; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT 186100-75-4, Fluoroslip 421 186100-76-5, Fluoroslip 511
 RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES (Uses)
 (blend with poly(tetrafluoroethylene), lubricant; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT 9002-84-0, PTFE
 RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES (Uses)
 (blend with polyethylene, lubricant; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT 1333-82-0, Chromium oxide (CrO₃)
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT 1317-33-5, Molybdenum sulfide, uses
 RL: MOA (Modifier or additive use); USES (Uses)
 (lubricant, LM 13; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT 7782-42-5, Graphite, uses 10043-11-5, UHPS 1, uses 25322-69-4D,
 monoethers 144913-72-4, Cefbon CMF
 RL: MOA (Modifier or additive use); USES (Uses)
 (lubricant; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT 9002-84-0, Fluon L 155J 9002-84-0, SST 1MG 9002-84-0, TL 10 (polymer)
 9002-88-4, Polyethylene 181285-40-5, Fluon L 171J 186048-62-4, Fluon L
 140J 186048-65-7, Teflon MP 1125
 RL: MOA (Modifier or additive use); POF (Polymer in formulation); USES (Uses)
 (lubricant; anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- IT 184015-80-3P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)
- RN 184015-80-3 HCAPLUS
- CN Phenol, 4,4'-(1-methylethyldiene)bis-, polymer with 2-(chloromethyl)oxirane and Duranate MF-B 80M (CA INDEX NAME)

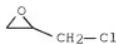
CM 1

CRN 174514-92-2
 CMF Unspecified
 CCI PMS, MAN

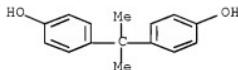
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7
CMF C15 H16 O2

IT 12597-69-3, Steel, miscellaneous

RL: MSC (Miscellaneous)
(anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 52360-06-2 68493-54-9 118889-49-9
119412-76-9 152259-57-9RL: TEM (Technical or engineered material use); USES (Uses)
(anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)

RN 52360-06-2 HCPLUS

CN Zinc alloy, base, Zn 88,Ni 12 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	88	7440-66-6
Ni	12	7440-02-0

RN 68493-54-9 HCPLUS

CN Aluminum alloy, base, Al 55,Zn 43,Si 1.6 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Al	55	7429-90-5
Zn	43	7440-66-6
Si	1.6	7440-21-3

RN 118889-49-9 HCPLUS

CN Zinc alloy, base, Zn 94,Al 5,Mo 0.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	94	7440-66-6

Al	5	7429-90-5
Mo	0.5	7439-98-7

RN 119412-76-9 HCPLUS
 CN Zinc alloy, base, Zn 88,Cr 12 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	88	7440-66-6
Cr	12	7440-47-3

RN 152259-57-9 HCPLUS
 CN Zinc alloy, base, Zn 86,Cr 12,Ni 2 (9CI) (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	86	7440-66-6
Cr	12	7440-47-3
Ni	2	7440-02-0

L116 ANSWER 13 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 1997:89960 HCPLUS Full-text

DN 126:105513

TI Low temperature-curable one liquid-type epoxy resin coatings

IN Asahina, Yoshuki; Sasahara, Hirotada

PA Asahi Chemical Ind, Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08302280	A	19961119	JP 1995-114362	19950512 <--
JP 3442191	B2	20030902		
PRAI JP 1995-114362		19950512 <--		

AB The coating compns. comprise (A) epoxy resins and/or acrylic resins having both epoxy groups and OH, (B) blocked polyisocyanates obtained from aliphatic and/or alicyclic diisocyanates, and (C) tertiary and/or quaternary amines. Thus, 100 parts AER 6007 (bisphenol A-type epoxy resin) was dissolved to 150 parts Bu cellosolve, then 100 parts the solution was blended with 24 parts Duranate MF-B 80M (HMDI-containing urethane-modified isocyanurate-type blocked polyisocyanate) and 0.30 parts Dabco, applied to a tin plate, and baked in an oven for 20 min at 120° to give test pieces with gel fraction ≥90% and storage stability for 1 wk at 50°.

IC ICM C09D0175-04

ICS C09D0133-14; C09D0163-00; C08G0018-58; C08G0018-80

CC 42-9 (Coatings, Inks, and Related Products)

IT 184015-80-3P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(low temperature-curable one liquid-type epoxy resin coatings)

IT 184015-80-3P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(low temperature-curable one liquid-type epoxy resin coatings)
 RN 184015-80-3 HCPLUS
 CN Phenol, 4,4'-(1-methylethyldene)bis-, polymer with 2-(chloromethyl)oxirane and Duranate MF-B 80M (CA INDEX NAME)

CM 1

CRN 174514-92-2
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

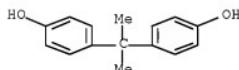
CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7
 CMF C15 H16 O2



L116 ANSWER 14 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1997:60943 HCPLUS Full-text

DN 126:76218

TI Pre-primed steel panels with good adhesion, anticorrosion, powdering resistance, and coatability

IN Yoshimi, Naoto; Urata, Kazuya; Kubota, Takahiro; Yamashita, Masaaki

PA Nippon Kokan Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08276154	A	19961022	JP 1995-103149	19950404 <--
JP 3304235	B2	20020722		
PRAI JP 1995-103149		19950404 <--		
AB Title panels are prepared by coating chromated (1-500 mg/m ² Cr) Zn (alloy)-plated steel panels with (modified)epoxy resins and 0.1-30 phr solid				

- lubricants to a thickness of 1.0–30 µm. A chromated galvanized steel panel was coated with a composition containing anticorrosive additives, Phenox Tohoto YP 50-6:1 IPDI/sorbitol adduct copolymer, silica, and Luvax 115 lubricant and baked to form a title panel.
- IC ICM B05D0007-14
 ICS B32B0015-08; C23C0028-00
- CC 42-9 (Coatings, Inks, and Related Products)
 Section cross-reference(s): 55
- ST solid lubricant epoxy primer galvanized steel; powdering resistance chromated steel epoxy primer; anticorrosive chromated steel epoxy primer; coatability chromated steel epoxy primer
- IT Primers (paints)
 (anticorrosive, powdering-resistant; solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel)
- IT Polyurethanes, uses
 Polyurethanes, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (epoxy; solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)
- IT Fluoropolymers, miscellaneous
 RL: MSC (Miscellaneous)
 (lubricant; solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)
- IT Epoxy resins, uses
 Epoxy resins, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polyurethane-; solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)
- IT Lubricants
 (solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion and powdering resistance and coatability)
- IT Epoxy resins, uses
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)
- IT Galvanized steel
 RL: MSC (Miscellaneous)
 (solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)
- IT 11149-64-1
 RL: MSC (Miscellaneous)
 (0.5% Mo-containing, platings; solid lubricant-containing epoxy resin primers
 on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)
- IT 1317-33-5, Molykote Z, miscellaneous
 RL: MSC (Miscellaneous)
 (lubricant; solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion and powdering resistance and coatability)

IT 9002-84-0, Teflon MP 1100
 RL: MSC (Miscellaneous)
 (lubricant; solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)

IT 37346-11-5 52975-39-0 54134-51-9
 74750-92-6
 RL: MSC (Miscellaneous)
 (platings; solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)

IT 9042-77-7DP, polymers with reaction products of TDI/octyl alc. adduct and bisphenol A epoxy resin and isopropanolamine 9048-90-2DP, polymers with reaction products of TDI/octyl alc. adduct and bisphenol A epoxy resin and isopropanoamine 101211-96-5DP, polymers with bisphenol A epoxy resin and isopropanolamine and polyoxyalkylene-diisocyanate resins
 134291-65-9P 153654-25-2DP, reaction products with TDI/octyl alc. adduct and polymers with polyoxyalkylene-diisocyanate resins
 184015-78-9P 184015-79-0P 184015-80-3P 184915-43-3P
 184915-46-6P 184915-48-8P 184915-50-2P 184915-53-5P 184915-54-6P
 185437-65-4P 185437-66-5P 185437-67-6P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)

IT 9002-88-4, Polyethylene
 RL: MSC (Miscellaneous)
 (wax, lubricant; solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)

IT 11149-84-1
 RL: MSC (Miscellaneous)
 (0.5% Mo-containing, platings; solid lubricant-containing epoxy resin primers
 on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)

RN 11149-84-1 HCPLUS
 CN Aluminum alloy, nonbase, Al,Zn (CA INDEX NAME)

Component	Component
	Registry Number

Al	7429-90-5
Zn	7440-66-6

IT 37346-11-5 52975-39-0 54134-51-9
 74750-92-6

RL: MSC (Miscellaneous)
 (platings; solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)

RN 37346-11-5 HCPLUS

CN Nickel alloy, nonbase, Ni,Zn (CA INDEX NAME)

Component	Component
	Registry Number

Ni	7440-02-0
Zn	7440-66-6

RN 52975-39-0 HCAPLUS
 CN Manganese alloy, nonbase, Mn,Zn (CA INDEX NAME)

Component	Component
	Registry Number
Mn	7439-96-5
Zn	7440-66-6

RN 54134-51-9 HCAPLUS
 CN Chromium alloy, nonbase, Cr,Zn (CA INDEX NAME)

Component	Component
	Registry Number
Cr	7440-47-3
Zn	7440-66-6

RN 74750-92-8 HCAPLUS
 CN Chromium alloy, nonbase, Cr,Ni,Zn (9CI) (CA INDEX NAME)

Component	Component
	Registry Number
Cr	7440-47-3
Ni	7440-02-0
Zn	7440-66-6

IT 134291-65-9P 134015-80-3P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (solid lubricant-containing epoxy resin primers on chromated and zinc
 alloy-plated steel for corrosion/powdering resistance and
 coatability)

RN 134291-65-9 HCAPLUS
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-
 (chloromethyl)oxirane and Takenate B 870N (CA INDEX NAME)

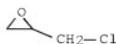
CM 1

CRN 124671-40-5
 CMF Unspecified
 CCI MAN

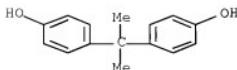
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

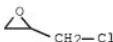
CRN 80-05-7
CMF C15 H16 O2RN 184015-80-3 HCPLUS
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and Duranate MF-B 80M (CA INDEX NAME)

CM 1

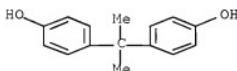
CRN 174514-92-2
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

L116 ANSWER 15 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 1996:751529 HCPLUS Full-text
 DN 126:20196
 TI Corrosion-resistant steel coated with organic composites and useful for automobile bodies
 IN Yoshimi, Naoto; Kubota, Takahiro; Yamashita, Masaaki
 PA Nippon Kokan Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08252527	A	19961001	JP 1995-84740	19950316 <--
JP 3259584	B2	20020225		
PRAI JP 1995-84740		19950316 <--		
AB Zinc-plated steel is chromated 5-200 mg/m ² , coated with solvents containing (A) bisphenol epoxy resins having number-average-mol. weight 300-100,000 100, (B) polyisocyanate crosslinking agents having ≥3 NCO groups/mol. 5-80, (C) a polyethylene wax 0.1-10 parts, and (D) rustproofing additives at (A + B)/D 90/10-40/60, and dried to coating thickness 0.2-3 µm. Thus, steel plated with 12:88 Ni-Zn was chromated and coated with cyclohexanone containing Epikote 1007, a reaction product of IPDI with Me Et ketoxime and sorbitol, Aerosil R811, Ba chromate, and a polyethylene wax.				
IC ICM B05D0007-14				
ICS B05D0003-10; B05D0005-00; B05D0007-24; B32B0015-08; C23C0022-24; C23C0028-00				
CC 42-9 (Coatings, Inks, and Related Products)				
Section cross-reference(s): 55, 56				
ST corrosion resistant zinc plated steel; chromated plated epoxy coated steel; polyisocyanate crosslinking agent epoxy coating; automobile body steel plate				
IT Silica gel, uses				
RL: MOA (Modifier or additive use); USES (Uses) (Syloid 244, rustproofing agents; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)				
IT Alloys, uses				
RL: TEM (Technical or engineered material use); USES (Uses) (plating; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)				
IT Lubricants				
(polyethylene; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)				
IT Crosslinking agents				
(polyisocyanates; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)				
IT Phenolic resins, uses				
RL: MOA (Modifier or additive use); USES (Uses) (resol; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)				
IT Chromates				
RL: MOA (Modifier or additive use); USES (Uses) (rustproofing agents; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)				
IT Rust (iron oxide)				
RL: MSC (Miscellaneous) (rustproofing agents; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)				
IT Coating materials				
(zinc-plated chromated steel coated with epoxy resins containing				

- rustproofing agents and polyethylene wax for automobile bodies)
- IT Galvanized steel
 RL: MSC (Miscellaneous)
 (zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)
- IT Epoxy resins, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)
- IT 50-70-4DP, D-Glucitol, reaction products with IPDI and Me Et ketoxime, uses 96-29-7DP, Methyl ethyl ketoxime, reaction products with IPDI and sorbitol 115-77-5DP, reaction products with IPDI and Me Et ketoxime 4098-71-9DP, Ipdi, reaction products with Me Et ketoxime and sorbitol
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (crosslinking agents; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)
- IT 9002-88-4, Polyethylene
 RL: MOA (Modifier or additive use); USES (Uses)
 (lubricants; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)
- IT 52360-06-2 88120-60-9 97365-06-5
 118889-49-9 152259-57-9
 RL: TEM (Technical or engineered material use); USES (Uses)
 (plating; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)
- IT 7631-86-9, Aerosil R 811, uses 7789-06-2, Strontium chromate 10294-40-3, Barium chromate 13530-65-9, Zinc chromate 13765-19-0, Calcium chromate 37224-57-9, Zinc potassium chromate 77466-62-7, Shieldex 84135-65-9, Finesil T 32 109944-58-3, Aerosil R 202 112153-70-5, Aerosil R 805 139351-18-1, Aerosil R 974
 RL: MOA (Modifier or additive use); USES (Uses)
 (rustproofing agents; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)
- IT 134498-50-3DP, Duranate TPA 100, reaction products with Me Et ketoxime
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)
- IT 184015-77-8P, Bisphenol A-epichlorohydrin-isophorone diisocyanate-sorbitol copolymer 184015-78-9P, Epikote 1007-isophorone diisocyanate-pentaerythritol copolymer 184015-79-0P 184015-80-3P 184309-24-8P 184309-25-9P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)
- IT 1333-82-0, Chromic anhydride 119412-76-9
 RL: TEM (Technical or engineered material use); USES (Uses)
 (zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile bodies)
- IT 52360-06-2 88120-60-9 97365-06-5
 118889-49-9 152259-57-9
 RL: TEM (Technical or engineered material use); USES (Uses)
 (plating; zinc-plated chromated steel coated with epoxy resins containing rustproofing agents and polyethylene wax for automobile

bodies)

RN 52360-06-2 HCAPLUS
 CN Zinc alloy, base, Zn 88,Ni 12 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	88	7440-66-6
Ni	12	7440-02-0

RN 88120-60-9 HCAPLUS
 CN Zinc alloy, base, Zn 85,Fe 15 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	85	7440-66-6
Fe	15	7439-89-6

RN 97365-06-5 HCAPLUS
 CN Manganese alloy, base, Mn 60,Zn 40 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Mn	60	7439-96-5
Zn	40	7440-66-6

RN 118889-49-9 HCAPLUS
 CN Zinc alloy, base, Zn 94,Al 5,Mo 0.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	94	7440-66-6
Al	5	7429-90-5
Mo	0.5	7439-98-7

RN 152259-57-9 HCAPLUS
 CN Zinc alloy, base, Zn 86,Cr 12,Ni 2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	86	7440-66-6
Cr	12	7440-47-3
Ni	2	7440-02-0

IT 37224-57-0, Zinc potassium chromate

RL: MOA (Modifier or additive use); USES (Uses)
 (rustproofing agents; zinc-plated chromated steel coated with
 epoxy resins containing rustproofing agents and polyethylene wax for
 automobile bodies)

RN 37224-57-0 HCAPLUS
 CN Chromium potassium zinc oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	x	17778-80-2

Zn		x		7440-66-6
Cr		x		7440-47-3
K		x		7440-09-7

IT 184015-80-3P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (zinc-plated chromated steel coated with epoxy resins containing
 rustproofing agents and polyethylene wax for automobile bodies)

RN 184015-80-3 HCPLUS

CN Phenol, 4,4'-(1-methylethyldene)bis-, polymer with 2-
 (chloromethyl)oxirane and Duranate MF-B 80M (CA INDEX NAME)

CM 1

CRN 174514-92-2

CMF Unspecified

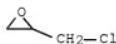
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8

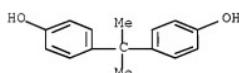
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



IT 119412-76-9

RL: TEM (Technical or engineered material use); USES (Uses)
 (zinc-plated chromated steel coated with epoxy resins containing
 rustproofing agents and polyethylene wax for automobile bodies)

RN 119412-76-9 HCPLUS

CN Zinc alloy, base, Zn 88, Cr 12 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	88	7440-66-6
Cr	12	7440-47-3

L116 ANSWER 16 OF 22 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1991:609392 HCAPLUS Full-text

DN 115:209392

TI Polycarbonate-polyamide blends

IN Takeshita, Nobushi; Kitamura, Kazuo

PA Teijin Chemicals, Ltd., Japan

SO Jpn. Kokai Tokyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 03028265	A	19910206	JP 1989-162702	19890627 <--
JP 2872272	B2	19990317		

PRAI JP 1989-162702 19890627 <--

AB Blends with good heat and chemical resistance contain (A) 100 parts mixture containing 25-90% polycarbonate and 10-75% polyamide, (B) 0.1-15 parts epoxy resins, and (C) 0.1-25 parts \geq 1 polymer selected from halogenated polyolefins, halo-containing rubbers, and block copolymers and olefin polymers modified by carboxylic acids or their derivs. Thus, L 1250 (polycarbonate) 53, nylon-6 (intrinsic viscosity 1.5 in m-cresol) 47, Epo Tohto YD 7020 (I, bisphenol A epoxy resin, epoxy equiv 3800-5000 g/equiv) 3, and Elasien 301A (30%-chlorinated polyethylene) 3 parts were melt kneaded, pelletized, and injection molded to give a test piece showing notched Izod impact strength 7 kg-cm/cm. Test pieces obtained at the 15th continuous shot and also at 19th shot (10 min pause between 15th and 16th) showed good appearance. On the contrary, the pieces prepared from as similar composition not containing I showed 2 kg-cm/cm and bad appearance in the injection molding.

IC ICM C08L0069-00

ICS C08L0077-00

ICI C08L0069-00, C08L0077-00, C08L0063-00, C08L0101-00

CC 37-6 (Plastics Manufacture and Processing)

IT 108-31-6D, 2,5-Furandione, reaction products with hydrogenated butadiene-styrene block copolymer or EPR 9002-88-4 26061-90-5, Bondfast E 106107-54-4D, hydrogenated, maleated 107080-92-2, Kaneace B 56 134291-65-9

RL: USES (Uses)

(polyamide-polycarbonate blends containing, with good heat and chemical resistance)

IT 25038-54-4, Nylon 6, properties 32131-17-2, Zytel 101L, properties

RL: PRP (Properties)

(polycarbonate blends containing, with good heat and chemical resistances)

IT 134291-65-9

RL: USES (Uses)

(polyamide-polycarbonate blends containing, with good heat and chemical resistance)

RN 134291-65-9 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and Takenate B 870N (CA INDEX NAME)

CM 1

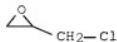
CRN 124671-40-5

CMF Unspecified

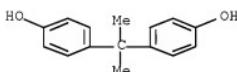
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

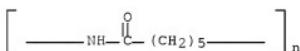
IT 25038-54-4, Nylon 6, properties

RL: PRP (Properties)

(polycarbonate blends containing, with good heat and chemical resistances)

RN 25038-54-4 HCPLUS

CN Poly[imino(1-oxo-1,6-hexanediyl)] (CA INDEX NAME)



L116 ANSWER 17 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1991:410987 HCPLUS [Full-text](#)

DN 115:10987

TI Epoxy resin-based lubricating coatings for ferrous metals

IN Yoshii, Kazuo; Miyosawa, Yoshiaki; Ozawa, Kazuhiko

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 03002257	A	19910108	JP 1989-137655	19890531 <--
PRAI	JP 1989-137655		19890531 <--		
AB	The title coatings, giving good processability and corrosion resistance, contain epoxy resins (glass temperature >80°) 100, silica sols 10-60 (as				

solids), polyolefin waxes (m.p. >90°) 0.3-20 parts, and optionally ≤100 phr (based on polyolefin wax) powdered fluoropolymers. Thus, a solution of Phenotohoto YP-50 (phenol-epichlorohydrin copolymer) 100, SiO₂ sol 20, and polyethylene wax 10 parts was coated (1.4 g/m² solids) on galvanized steel and dried at 120° to give a plate with good processability and rusting time (JIS Z-2371) 624 and 552 h for unprocessed and bent part, resp.; vs. poor, 480, and 360, resp., with a polyvinyl butyral in place of Phenotohoto YP-50.

IC ICM C08L0063-00

ICS C08K0003-36; C09D0163-00

ICI C08L0063-00, C08L0023-00

CC 42-9 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55

ST epoxy resin coating steel; corrosion resistance coating

steel; lubricant coating steel; galvanized steel

coating; silica sol coating steel; polyethylene wax coating

steel

IT Galvanized iron and steel

RL: USES (Uses)

(anticorrosive lubricating coatings for, epoxy resin compns. as)

IT 25068-38-6, Phenotohoto YP-50 25068-38-6, Epotohoto YD-7020

134291-65-9 134291-65-9

RL: TEN (Technical or engineered material use); USES (Uses)

(coatings, anticorrosive and lubricating, for ferrous metals)

IT 134291-65-9

RL: TEN (Technical or engineered material use); USES (Uses)

(coatings, anticorrosive and lubricating, for ferrous metals)

RN 134291-65-9 HCAPLUS

CN Phenol, 4,4'-(1-methylethyldiene)bis-, polymer with 2-(chloromethyl)oxirane and Takenate B 870N (CA INDEX NAME)

CM 1

CRN 124671-40-5

CMF Unspecified

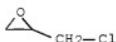
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8

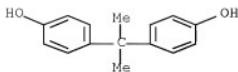
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



L116 ANSWER 18 OF 22 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 1990:218912 HCAPLUS Full-text

DN 112:218912

TI Manufacture of highly corrosion-resistant surface-treated steel plates

IN Watanabe, Tsutomu; Yamashita, Masaaki; Kubota, Takahiro

PA NKK Corp., Japan

SO Eur. Pat. Appl., 22 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 348890	A1	19900103	EP 1989-111671	19890627 <--
	EP 348890	B1	19931208		
	R: DE, FR, GB				
	JP 02015177	A	19900118	JP 1988-163718	19880630 <--
	JP 07035587	B	19950419		
	US 4971636	A	19901120	US 1989-369465	19890621 <--
	AU 8936788	A	19900104	AU 1989-36788	19890623 <--
	AU 611618	B2	19910613		
	CA 1333030	C	19941115	CA 1989-603769	19890623 <--
PRAI	JP 1988-163718	A	19880630	<--	

AB The title plates, especially useful for inner sides of automobile bodies, are prepared from Zn or Zn alloy-plated steel plates by chromate treatment with a bath containing Zr fluoride and Zn ions and having a low Cr⁶⁺/Cr³⁺ ratio and coating with a solvent-type thermosetting composition obtained by adding silica and/or a sparingly water-soluble Cr compound to a basic epoxy resin. The method minimizes the elution of Cr in spite of low drying temps. Treating a Ni-Zn alloy-plated steel plate with a solution containing CrO₃ 5, P043- 4, ZrF62- 0.5, and Zn2+ 1 g/L (Cr⁶⁺/Cr³⁺ = 1; CrO42-/ZrF62- = 10), coating with a solution containing 60% mixture of dibutyltin dilaurate 1.0, ethylene glycol mono-Et ether-blocked MDI 25, and dipropanolamine-Epikote 1009 adduct 100 parts and 40% 3:1 Aerosil R811-BaCrO₄, and baking at 140° gave a plate showing low Cr elution, good coating adhesion, and good anticorrosion properties.

IC ICM C23C0022-38

ICS C23C0022-83

CC 42-10 (Coatings, Inks, and Related Products)

Section cross-reference(s): 55

ST chromate steel corrosion prevention; zinc steel corrosion prevention; phosphate steel corrosion prevention; zirconium fluoride steel anticorrosion; epoxy coating steel anticorrosive; silica coating steel anticorrosive; adhesion epoxy coating steel; automobile body steel anticorrosive

IT Coating materials
 (anticorrosive, chromate solns. and epoxy resins, on steel panels for automobiles)

IT Automobiles
 (body panels, anticorrosive steel for, manufacture of)

IT 12597-69-2

RL: MSC (Miscellaneous)

(coating materials, anticorrosive, chromate solns. and epoxy resins, on steel panels for automobiles)

IT 77-99-6D, reaction products with isophorone diisocyanate 80-05-7D, polymers with epichlorohydrin and polyisocyanates 106-89-8D, polymers with bisphenol A and polyisocyanates 4098-71-9D, reaction products with trimethylolpropane 14002-33-6D, polymers with polyepoxides and polyisocyanates

RL: USES (Uses)

(coatings containing, for steel panels, anticorrosive)

IT 111-42-2D, Diethanolamine, reaction products with epoxy resins 112-05-0D, Pelargonic acid, reaction products with epoxy resins 141-43-5D, Monoethanolamine, reaction products with epoxy resins 30228-06-9D, Isophoronediisocyanate-trimethylolpropane copolymer, reaction products with epoxy resins

RL: USES (Uses)

(coatings containing, on chromate-treated steel, anticorrosive)

IT 7738-94-5, Chromic acid (H₂CrO₄)

RL: USES (Uses)

(coatings containing, on steel panels, anticorrosive)

IT 7631-86-9, Silica, uses and miscellaneous 7758-97-6 7789-00-6, Potassium chromate 7789-06-2, Strontium chromate 10294-40-3, Barium chromate 12433-50-0 13765-19-0, Calcium chromate 20160-85-4 23713-49-7, Zinc (II) ion, uses and miscellaneous 49663-84-5, Zinc chromate hydroxide (Zn₅(CrO₄)(OH)₈)

RL: USES (Uses)

(coatings containing, on steel plates, anticorrosive)

IT 25068-38-6, Epikote 1004 127195-73-7

RL: TEM (Technical or engineered material use); USES (Uses)

(coatings, on chromate-treated steel plates, anticorrosive)

IT 52360-06-2 89944-95-6 97365-06-5

118809-49-9

RL: USES (Uses)

(steel panels plated with, corrosion-resistant)

IT 12597-69-2

RL: MSC (Miscellaneous)

(coating materials, anticorrosive, chromate solns. and epoxy resins, on steel panels for automobiles)

RN 12597-69-2 HCAPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 12433-50-0 20160-85-4 49663-84-5, Zinc chromate hydroxide (Zn₅(CrO₄)(OH)₈)

RL: USES (Uses)

(coatings containing, on steel plates, anticorrosive)

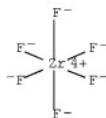
RN 12433-50-0 HCAPLUS

CN Potassium zinc chromate oxide (K₂Zn₄(CrO₄)₄O) (CA INDEX NAME)

Component	Ratio	Component	Registry Number
O	1	17778-80-2	
CrO ₄	4	13907-45-4	
Zn	4	7440-66-6	
K	2	7440-09-7	

RN 20160-85-4 HCAPLUS

CN Zirconate(2-), hexafluoro-, (OC-6-11)- (CA INDEX NAME)



RN 49663-84-5 HCAPLUS
 CN Zinc chromate hydroxide (Zn5(CrO₄)(OH)₈) (CA INDEX NAME)

Component	Ratio	Component	Registry Number
HO	8		14280-30-9
CrO ₄	1		13907-45-4
Zn	5		7440-66-6

IT 127195-73-7
 RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, on chromate-treated steel plates, anticorrosive)
 RN 127195-73-7 HCAPLUS
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane,
 3,3'-iminobis[1-propanol] and 1,1'-methylenebis[4-isocyanatobenzene] (9CI)
 (CA INDEX NAME)

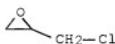
CM 1

CRN 14002-33-6
 CMF C₆ H₁₅ N O₂



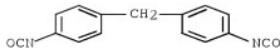
CM 2

CRN 106-89-8
 CMF C₃ H₇ Cl O



CM 3

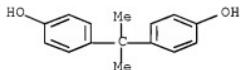
CRN 101-68-8
 CMF C₁₅ H₁₀ N₂ O₂



CM 4

CRN 80-05-7

CMF C15 H16 O2



IT 52360-06-2 89944-95-6 97365-06-5

118889-49-9

RL: USES (Uses)

(steel panels plated with, corrosion-resistant)

RN 52360-06-2 HCPLUS

CN Zinc alloy, base, Zn 88,Ni 12 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
<hr/>		
Zn	88	7440-66-6
Ni	12	7440-02-0

RN 89944-95-6 HCPLUS

CN Zinc alloy, base, Zn 75,Fe 25 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
<hr/>		
Zn	75	7440-66-6
Fe	25	7439-89-6

RN 97365-06-5 HCPLUS

CN Manganese alloy, base, Mn 60,Zn 40 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
<hr/>		
Mn	60	7439-96-5
Zn	40	7440-66-6

RN 118889-49-9 HCPLUS

CN Zinc alloy, base, Zn 94,Al 5,Mo 0.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
<hr/>		
Zn	94	7440-66-6
Al	5	7429-90-5

Mo 0.5

7439-98-7

L116 ANSWER 19 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 1987:556500 HCPLUS Full-text

DN 107:156500

TI Thin-film-type durable anticorrosive coating material compositions

IN Kurokawa, Yukichi; Aoki, Hiroshi; Matsuo, Shunichi

PA Shinto Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

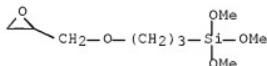
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62054772	A	19870310	JP 1985-195154	19850904 <--
	JP 07030271	B	19950405		
PRAI	JP 1985-195154		19850904	<--	
AB	Undercoating materials contain polymeric epoxy polyol resins, polyisocyanates, rustproofing pigments, H3PO4, and coupling agents. Zn-plated steel was coated with a mixture of Epikote 1009, solvents, additives, H3PO4, and hexamethylene diisocyanate and topcoated with an epoxy coating composition				
IC	ICM C09D0005-08				
	ICS C09D0003-72				
CC	42-9 (Coatings, Inks, and Related Products)				
	Section cross-reference(s): 55, 56				
IT	2530-83-8, A187				
	RL: USES (Uses)				
	(coupling agents, in anticorrosive undercoatings)				
IT	110585-87-0				
	RL: USES (Uses)				
	(undercoatings containing rustproofing pigments and)				
IT	7664-38-2, Phosphoric acid, uses and miscellaneous				
	RL: USES (Uses)				
	(undercoatings containing, anticorrosive)				
IT	2530-83-8, A187				
	RL: USES (Uses)				
	(coupling agents, in anticorrosive undercoatings)				
RN	2530-83-8 HCPLUS				
CN	Oxirane, 2-[3-(trimethoxysilyl)propoxy]methyl- (CA INDEX NAME)				



IT 110585-87-0

RL: USES (Uses)

(undercoatings containing rustproofing pigments and)

RN 110585-87-0 HCPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane and Sumidur N 75 (9CI) (CA INDEX NAME)

CM 1

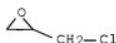
CRN 72429-63-1

CMF Unspecified
CCI MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

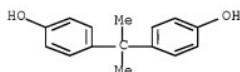
CM 2

CRN 106-89-8
CMF C3 H5 Cl O



CM 3

CRN 80-05-7
CMF C15 H16 O2



IT 7664-38-0, Phosphoric acid, uses and miscellaneous
RL: USES (Uses)
(undercoatings containing, anticorrosive)
RN 7664-38-2 HCPLUS
CN Phosphoric acid (CA INDEX NAME)



L116 ANSWER 20 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN
AN 1985:167961 HCPLUS Full-text
DN 102:167961
TI Reactive hot-melt adhesives
PA W. R. Grace and Co., USA
SO Jpn. Kokai Tokkyo Koho, 19 pp. ADDN to Jpn. Kokai Tokyo Koho Appl. No. 82
171,086.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
------------	------	------	-----------------	------

PI JP 59204611 A 19841120 JP 1983-77363 19830430 <--
 JP 58080317 A 19830514 JP 1982-171086 19821001 <--
 PRAI JP 1982-171086 19821001 <--
 US 1981-317647 A 19811102 <--

AB A reactive hot-melt adhesive comprises a thermoplastic polyurethane containing an epoxy side chain, which is prepared by treating an epoxy resin with an isocyanate-terminated polyurethane prepolymer. Thus, 127.8 g polypropylene glycol was treated with 61.4 g toluene diisocyanate for 4 days to give an isocyanate-terminated polyurethane prepolymer. Then, 71.6 g prepolymer was treated with 357 g Epon 1001 F (epoxy resin, OH equivalent 357) in the presence of 6 g dicyandiamide and 1 g Ph3P at 80° for 1 h to give a hot-melt adhesive. A steel plate was coated with the adhesive at 125°, pressed with another steel plate, and cured at 160° for 30 min to give a product having peel strength 3200 psi.

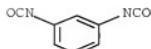
IC C08G0018-58; C09J0003-16; C09K0003-10
 CC 38-3 (Plastics Fabrication and Uses)
 ST polyurethane epoxy hot melt adhesive; polypropylene glycol polyurethane epoxy adhesive; toluene diisocyanate polyurethane epoxy adhesive; steel reactive hot melt adhesive
 IT 12597-69-3, uses and miscellaneous
 RL: USES (Uses)
 (plates, reactive hot-melt adhesives for, polyurethanes with epoxy side chains as)
 IT 101-68-8D, polymers with Epon 1001 F and polycaprolactone diol
 25068-38-6D, polymers with MDI and polycaprolactone diol 25248-42-4D,
 diol derivs., polymers with MDI and Epon 1001 F 78099-73-7
 92488-61-4
 RL: USES (Uses)
 (reactive hot-melt adhesives from, manufacture of)
 IT 12597-69-3, uses and miscellaneous
 RL: USES (Uses)
 (plates, reactive hot-melt adhesives for, polyurethanes with epoxy side chains as)
 RN 12597-69-2 HCAPLUS
 CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 92488-61-4
 RL: USES (Uses)
 (reactive hot-melt adhesives from, manufacture of)
 RN 92488-61-4 HCAPLUS
 CN Phenol, 4, 4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and α-hydro-ω-hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

CM 1

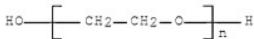
CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



D1-Me

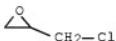
CM 2

CRN 25322-68-3
 CMF (C₂ H₄ O)_n H₂ O
 CCI PMS



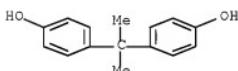
CM 3

CRN 106-89-8
 CMF C₃ H₅ Cl O



CM 4

CRN 80-05-7
 CMF C₁₅ H₁₆ O₂



L116 ANSWER 21 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN				
AN	1984:593318 HCPLUS <u>Full-text</u>			
DN	101:193318			
TI	Thermoplastic with urethane and pendant epoxy groups and thermosetting adhesive containing it			
IN	Lin, Shioi Ching			
PA	W. R. Grace and Co., USA			
SO	Fr. Demande, 42 pp. Addn. to Fr. Demande Appl. No. 82 18282.			
CODEN:	FRXXBL			
DT	Patent			
LA	French			
FAN.CNT	4			
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 2536753	A2	19840601	FR 1983-7195	19830429 <--
FR 2536753	B2	19870619		
FR 2515659	A1	19830506	FR 1982-18282	19821029 <--

FR 2515659	B1	19870320		
CA 1229192	A1	19871110	CA 1983-423760	19830316 <--
PRAI US 1982-444987	A	19821129	<--	
FR 1982-18282		19821029	<--	
US 1981-317647	A	19811102	<--	

AB An epoxy resin containing ≥ 2 OH groups reacts with a diol-polyisocyanate reaction product to give a melt-processable, thermosetting thermoplastic containing pendant epoxy groups which is applied to substrates as an adhesive and cured by heating, giving strong joints. Thus, 61 g reaction product prepared from 127.8 g polypropylene glycol (mol. weight 725) and 61.4 g TDI was mixed with 6 g dicyandiamide and 100 g reaction product (epoxide equivalent weight 292) prepared from 100 g bisphenol A diglycidyl ether and 15 g bisphenol A. The molten mixture was applied to steel surfaces at 100°, and the surfaces were pressed together and heated 30 min at 180° to give a joint with shear strength 241 + 105 Pa (ASTM D 1002-64, 1.27 cm overlap).

IC C08G0018-58; C08G0059-18; C09D0003-72; C09J0003-16; C09K0003-10

CC 38-3 (Plastics Fabrication and Uses)

IT 101-68-8D, polymers with diols and epoxy-containing polyols 9003-17-2D, hydroxy-terminated, polymers with epoxy-containing polyols and tolylene diisocyanate 24980-41-4D, ethers with diols, polymers with epoxy-containing polyols and isocyanates 25068-38-6D, polymers with isocyanate-terminated diols 26471-62-5D, polymers with diols and epoxy-containing polyols 39280-07-4D, polymers with epoxy-containing polyols and isocyanates 78099-73-7 78099-73-7 78099-73-7 92488-61-4 92488-62-5 92489-08-2 92529-64-1D, polymers with isocyanate-terminated diols RL: TEM (Technical or engineered material use); USES (Uses)
(adhesives, hot-melt, thermosetting)

IT 92489-61-4

RL: TEM (Technical or engineered material use); USES (Uses)
(adhesives, hot-melt, thermosetting)

RN 92488-61-4 HCPLUS

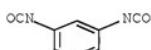
CN Phenol, 4, 4'-(1-methylethyldene)bis-, polymer with 2-(chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



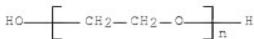
D1-Me

CM 2

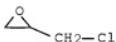
CRN 25322-68-3

CMF (C2 H4 O)n H2 O

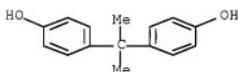
CCI PMS



CM 3

CRN 106-89-8
CMF C3 H5 Cl O

CM 4

CRN 80-05-7
CMF C15 H16 O2

L116 ANSWER 22 OF 22 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1979:56295 HCPLUS Full-text

DN 90:56295

TI Finishing agents for canvas in paper-making machines

IN Sasaki, Dai; Sasano, Tetsuo; Komuro, Masaya

PA Shikishima Spinning Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 53114898	A	19781006	JP 1977-26238	19770309 <--
JP 55033811	B	19800903		

PRAI JP 1977-26238 A 19770309 <--

AB Primary condensates of epoxy compds., polyisocyanates, and polyols and curing agents are dispersed in H₂O to give finishing agents for paper-making canvas. Thus, 470 parts Epon 834 and 104.4 parts tolylene diisocyanate were stirred 1 h at 90°, 360 parts polyethylene glycol (mol. weight 600) added, and stirred at 90° until free NCO groups disappeared. A composition of the above copolymer [68985-79-5] 15, H₂O 85, and triethylenetetramine 0.6 part was applied to polyamide multifilament yarns to 75% pickup, dried 10 min at 100°, and heated 5 min at 180°. The yarns were woven to give canvas having good dimensional stability, working stability, and durability.

IC C08G0018-58

CC 39-10 (Textiles)

Section cross-reference(s): 43

IT 68985-78-4 92488-61-4

RL: USES (Uses)

(finishing agents, for paper-making canvas)

IT 92488-61-4

RL: USES (Uses)

(finishing agents, for paper-making canvas)

RN 92488-61-4 HCAPLUS

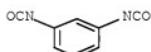
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) (CA INDEX NAME)

CM 1

CRN 26471-62-5

CMF C9 H6 N2 O2

CCI IDS



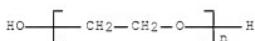
D1-Me

CM 2

CRN 25322-68-3

CMF (C2 H4 O)n H2 O

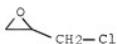
CCI PMS



CM 3

CRN 106-89-8

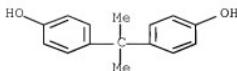
CMF C3 H5 Cl O



CM 4

CRN 80-05-7

CMF C15 H16 O2



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<http://www.cas.org/support/stngen/stndoc/properties.html>

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L137 ANSWER 1 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
AN 2005:545703 HCPLUS Full-text
DN 143:79747
TI Aqueous resin particles for cathodic electrodeposition coating compositions with balanced smoothness and defect resistance
IN Hisashi, Mito; Fujimura, Yuki; Ohata, Masatoshi; Mihara, Yasuhisa; Hori, Hitoshi
PA Nippon Paint Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2005162916	A	20050623	JP 2003-405288	20031204 <--
PRAI JP 2003-405288		20031204 <--		
AB Title particles are prepared by emulsion polymerization of monomer mixts. containing alkoxy silyl-containing α,β -ethylenically unsatd. monomers in the presence of dispersing agents having ammonium group obtained by adding				

tertiary amines and organic acids to epoxy-containing resins. Thus, glycidyl methacrylate 19, 2-ethylhexyl methacrylate 60, 2-hydroxyethyl methacrylate 20, and Bu methacrylate 1 parts were polymerized to give a copolymer with weight average mol. weight 17,900, 7 parts dimethylaminoethanol and 15 parts 50% aqueous lactic acid solution were added therein and heated to give an ammonium-containing copolymer, 20 parts of which was mixed with 270 parts water, 1.5 parts acetic acid-neutralized 2,2'-azobis[2-(2-imidazolyl-2-yl)propane] were added therein, a monomer solution containing Me methacrylate, styrene, Bu methacrylate, γ -methacryloyloxypropyltriethoxysilane was added therein and polymerized to give an aqueous resin particle dispersion with solid content 38% and average particle diameter 90 nm, which was formulated with epoxy-based resin, pigment dispersant, and a blocked isocyanate, electrodeposited onto zinc phosphate-treated steel plate, and baked at 160° for 15 min to give a cured coating, showing good smoothness and defect resistance.

IT 133988-63-3DP, sulfonated

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(pigment dispersant; aqueous resin particles for cathodic electrodeposition coating compns. with balanced smoothness and defect resistance)

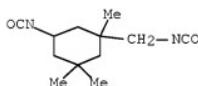
RN 133988-63-3 HCPLUS

CN Phenol, 4,4'-(1-methylethyldiene)bis-, polymer with 2-(chloromethyl)oxirane and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (CA INDEX NAME)

CM 1

CRN 4098-71-9

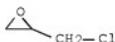
CMF C12 H18 N2 O2



CM 2

CRN 106-89-8

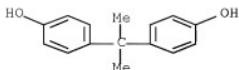
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



L137 ANSWER 2 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 2004:1127448 HCPLUS Full-text

DN 142:58372

TI Highly corrosion-resistant surface-treated steel sheet and method for producing same

IN Miyoshi, Tatsuya; Sasaki, Kenichi; Yoshimi, Naoto; Matsuzaki, Akira; Okai, Kazuhisa; Ooshima, Takao; Nakano, Takashi; Murata, Masahiro; Tanaka, Syoichi

PA JFE Steel Corporation, Japan; Kansai Paint Co., Ltd.

SO PCT Int. Appl., 122 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004111141	A1	20041223	WO 2004-JP8650	20040614 <--
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	JP 2006002167	A	20060105	JP 2004-173337	20040611 <--
	EP 1634932	A1	20060315	EP 2004-736805	20040614 <--
	R: DE, FR, GB				
	CN 1836016	A	20060920	CN 2004-80023517	20040614 <--
	US 2006141230	A1	20060629	US 2005-559641	20051202 <--
PRAI	JP 2003-171344	A	20030616	<--	
	JP 2004-146334	A	20040517	<--	
	WO 2004-JP8650	W	20040614	<--	
AB	A surface-treated steel sheet is disclosed which comprises a zinc-plated steel sheet, a surface treatment film formed on the surface of the zinc-plated steel sheet by applying a surface treatment composition to the steel sheet and drying it, and an upper coating film formed over the surface treatment film by applying a coating composition for the upper coating film over the surface treatment film and drying it. The surface treatment composition contains an aqueous epoxy resin dispersion, a silane coupling agent, and a phosphoric acid and/or a fluorometallic acid. The coating composition for the upper coating film contains a high mol. weight, epoxy group-containing resin having a number-average mol. weight of 6000-20,000.				
IT	83023-89-8P, Bisphenol A;epichlorohydrin;formaldehyde;melamine copolymer				
	RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)				
	(coatings for manufacture of highly corrosion-resistant surface-treated				

steel sheets)

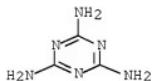
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

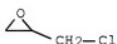
CMF C3 H6 N6



CM 2

CRN 106-89-8

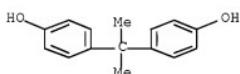
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0

CMF C H2 O

IT 7664-38-2, Phosphoric acid, uses 12021-95-3
16961-83-4, Hexafluorosilicic acid 17439-11-1,

Hexafluorotitanic acid

RL: MOA (Modifier or additive use); USES (Uses)
 (coatings for manufacture of highly corrosion-resistant surface-treated
 steel sheets)

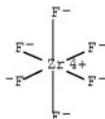
RN 7664-38-2 HCPLUS

CN Phosphoric acid (CA INDEX NAME)



RN 12021-95-3 HCPLUS

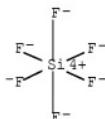
CN Zirconate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



●2 H+

RN 16961-83-4 HCPLUS

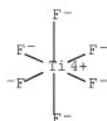
CN Silicate(2-), hexafluoro-, hydrogen (1:2) (CA INDEX NAME)



●2 H+

RN 17439-11-1 HCPLUS

CN Titanate(2-), hexafluoro-, hydrogen (1:2), (OC-6-11)- (CA INDEX NAME)



● 2 H⁺

IT 11149-84-1 12609-49-3 52360-06-2
 58465-32-0 112964-43-9 142240-64-0
 208469-25-4

RL: MSC (Miscellaneous)
 (plating on steel; coatings for manufacture of highly
 corrosion-resistant surface-treated steel sheets)

RN 11149-84-1 HCPLUS

CN Aluminum alloy, nonbase, Al,Zn (CA INDEX NAME)

Component Component
 Registry Number

Component	Registry Number
Al	7429-90-5
Zn	7440-66-6

RN 12609-49-3 HCPLUS

CN Aluminum alloy, base, Al 94,Si 6 (CA INDEX NAME)

Component Component Component
 Percent Registry Number

Component	Percent	Registry Number
Al	94	7429-90-5
Si	6	7440-21-3

RN 52360-06-2 HCPLUS

CN Zinc alloy, base, Zn 88,Ni 12 (CA INDEX NAME)

Component Component Component
 Percent Registry Number

Component	Percent	Registry Number
Zn	88	7440-66-6
Ni	12	7440-02-0

RN 58465-32-0 HCPLUS

CN Zinc alloy, base, Zn 90,Fe 10 (CA INDEX NAME)

Component Component Component
 Percent Registry Number

Component	Percent	Registry Number
Zn	90	7440-66-6
Fe	10	7439-89-6

RN 112964-43-9 HCPLUS

CN Zinc alloy, base, Zn 100,Mg 0.5 (CA INDEX NAME)

Component Component Component
 Percent Registry Number

Zn	100	7440-66-6
Mg	0.5	7439-95-4

RN 142240-64-0 HCAPLUS
CN Zinc alloy, base, Zn 94, Al 5, Mg 0.5 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	94	7440-66-6
Al	5	7429-90-5
Mg	0.5	7439-95-4

RN 208469-25-4 HCAPLUS
CN Zinc alloy, base, Zn 91, Al 6, Mg 3 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	91	7440-66-6
Al	6	7429-90-5
Mg	3	7439-95-4

IT 12597-69-2, Steel, miscellaneous
RL: MSC (Miscellaneous)
(substrate, Zn alloy-plated; coatings for manufacture of highly corrosion-resistant surface-treated steel sheets)

RN 12597-69-2 HCAPLUS
CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

RETABLE

Referenced (RAU)	Author	Year (RPY)	VOL (RVL)	PG (RPG)	Referenced Work (RWK)	Referenced File
Kansai Paint Co Ltd		12001			JP 2001239517 A	HCAPLUS
Kansai Paint Co Ltd		12003			JP 200334713 A	
Nkk Corp		12001			JP 2001335965 A	HCAPLUS
Nkk Corp		12002			EP 129453 A1	
Nkk Corp		12002			WO 200192602 A1	
Nkk Corp		12002			JP 200253979 A	

L137 ANSWER 3 OF 38 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:963075 HCAPLUS Full-text

DN 141:396948

TI Lubricating metal sheet with good drawing and ironing workability for can

IN Inomata, Takashi; Amaki, Shingo; Maruki, Shinichiro

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2004314415	A	20041111	JP 2003-110927	20030416 <--
PRAI JP 2003-110927		20030416	<--	
AB The sheet with high corrosion resistance has a coating film containing epoxy resins and waxes having softening point $\geq 30^\circ$ on the surface for can inside,				

wherein the film satisfies dry weight 10-85 mg/100 cm², dynamic friction coefficient at 60° 0.03-0.20, and pencil hardness at 60° ≥ H. The can formed by (1) drawing and ironing the sheet and then coating the resulting can inside, (2) drawing and ironing the sheet and then coating or film-laminating the resulting can outside, or (3) coating or film-laminating the sheet and then drawing and ironing the coated or laminated sheet is also claimed. Thus, an AA 3004 (Al alloy) sheet was coated with a mixture containing Epikote 1009 (bisphenol A epoxy resin), Hitanol 3305N (phenolic resin), Hi-Disper F 10PC (carnauba wax), and other additives and heated to give a coated sheet showing dynamic friction coefficient at 60° 0.06 and good drawing and ironing workability.

IT 85023-89-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(coating; epoxy resin- and wax-coated lubricating metal sheet with good drawing and ironing workability for can)

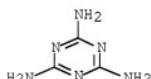
RN 85023-89-8 HCAPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

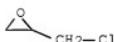
CMF C3 H6 N6



CM 2

CRN 106-89-8

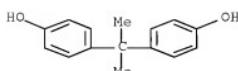
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0
CMF C H₂ OH₂C=O

IT 12597-69-2, Steel, uses
 RL: TEM (Technical or engineered material use); USES (Uses)
 (sheet; epoxy resin- and wax-coated lubricating metal sheet with good
 drawing and ironing workability for can)
 RN 12597-69-2 HCPLUS
 CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L137 ANSWER 4 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 2003:913252 HCPLUS Full-text

DN 139:382838
 TI Coating compositions for prestressed concrete tension materials
 IN Hirata, Seiichiro; Shirahama, Shoji; Kobayashi, Toshio; Aoyama, Ichirou
 PA Shinko Wire Co., Ltd., Japan
 SO PCT Int. Appl., 31 pp.
 CODEN: PIXXD2

DT Patent
 LA Japanese
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003095572 W: CN, US RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR	A1	20031120	WO 2003-JP5810	20030509 <--
	JP 2004043767 US 2005171302 CN 1653143	A	20040212 20050804 20050810	JP 2002-357247 US 2003-514039 CN 2003-810832	20021209 <-- 20030509 <-- 20030509 <--
PRAI	JP 2002-137736 JP 2002-357247 WO 2003-JP5810	A	20020513 20021209 W	20030509 <--	

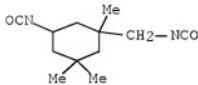
AB Title compns., which are coated on tension materials and embedded in concrete to develop tension over 30 days and to adjust the curing time, contain epoxy resins, polyfunctional isocyanates, CaO, and water. A composition containing R 140 72.3, IPDI 2.17, CaO 13.77, CaCO₃ 10.21, SiO₂ 1.38, and water 0.17 g showed initial viscosity (VS) of 65 Pa·s with good storage stability, which was coated on steel rods, covered with a polyethylene sheath material, and embedded in concrete for 30 days. The composition from the coated rods embedded over 30 days showed VS of 610 Pa·s and the composition from the coated rods embedded over 1.5 yr showed Durometer D hardness of 46.

IT 133988-63-3P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (polyisocyanate- and CaO-containing epoxy resin coatings for tension materials for prestressed concrete)
 RN 133988-63-3 HCPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (CA INDEX NAME)

CM 1

CRN 4098-71-9
CMF C12 H18 N2 O2



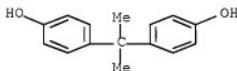
CM 2

CRN 106-89-8
CMF C3 H5 Cl O



CM 3

CRN 80-05-7
CMF C15 H16 O2



RETABLE

Referenced Author (RAU)	Year VOL PG	Referenced Work (R PY) (R VL) (R PG)	Referenced Work (R WK)	Referenced File
Mitsui Chemicals Inc	2000	EP 1048682 A2	HCAPLUS	
Mitsui Chemicals Inc	2000	JP 20019825 A		
Mitsui Chemicals Inc	2000	US 6387310 B1		
Mitsui Sekiyu Kagaku Koi1990		US 4929650 A		
Mitsui Sekiyu Kagaku Koi1990		JP 64-31873 A		
Sumitomo Electric Indus 2000		JP 2000281967 A	HCAPLUS	

TI Anticorrosive coating of non-chromated metal tube surface and method for pretreatment of the surface
 IN Yamamoto, Masato; Kutsuwa, Shuichi; Urushima, Hideto; Akui, Jun
 PA Kansai Paint Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 9 pp.
 CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003213456	A	20030730	JP 2002-13681	20020123 <--
PRAI JP 2002-13681		20020123	<--	

AB In the method, metal tube surface is pretreated prior to covering with resin layers where the pretreatment is derived from a mixture of (A) aqueous solution containing the reaction products of hydrolyzable Ti compound or/and its lower condensate or/and Ti hydroxide or/and its lower condensate with H₂O₂, and (B) P compds., FH, metal halides or/and salts, Si halides or/and salts or/and organic acid or/and its salts. Thus, dropping a 1:9 NH₃ water into 500 mL solution made from 5 mL 60% aqueous solution of TiCl₄ and water, washing the resulting precipitated Ti hydroxide with water, and mixing with 10 mL a 30% H₂O₂ solution gave a semi-transparent yellow liquid of 70 mL volume Dipping a degreased Zn-plated steel plate in a solution containing the liquid 50, 10% orthophosphoric acid 5 and water 45 parts at 30° for 30 s, baking at 160° for 10 min, spray coating the pretreated surface with an epoxy resin, baking and coating with a vinylidene fluoride resin layer gave a finished tube with good salt-spray corrosion test resistance.

IT 37346-11-5

RL: TEM (Technical or engineered material use); USES (Uses)
 (plating on steel for tubes; hydrolyzable titanium compds.
 for pretreatment of metal tubes prior to multilayer anticorrosive
 coating and method for pretreatment)

RN 37346-11-5 HCPLUS

CN Nickel alloy, nonbase, Ni,Zn (CA INDEX NAME)

Component	Component
Registry Number	
Ni	7440-02-0
Zn	7440-66-6

IT 7664-38-2, Orthophosphoric acid, uses

RL: TEM (Technical or engineered material use); USES (Uses)
 (pretreatment with titanium compds.; hydrolyzable titanium compds. for
 pretreatment of metal tubes prior to multilayer anticorrosive coating
 and method for pretreatment)

RN 7664-38-2 HCPLUS

CN Phosphoric acid (CA INDEX NAME)



IT 85823-39-8, Bisphenol A-epichlorohydrin-formaldehyde-melamine copolymer

RL: TEM (Technical or engineered material use); USES (Uses)

(surface under coating; hydrolyzable titanium compds. for pretreatment of metal tubes prior to multilayer anticorrosive coating and method for pretreatment)

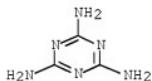
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

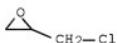
CMF C3 H6 N6



CM 2

CRN 106-89-8

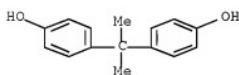
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0

CMF C H2 O



IT 12597-69-3, Steel, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(tubes; hydrolyzable titanium compds. for pretreatment of metal tubes
prior to multilayer anticorrosive coating and method for pretreatment)

RN 12597-69-2 HCAPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L137 ANSWER 6 OF 38 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2002:602002 HCAPLUS Full-text

DN 137:141903

TI Formation of multilayer coatings by three-coat-one-bake process with
excellent appearance

IN Nakazawa, Noriyuki; Ishii, Toshiyuki; Yamamoto, Takeshi

PA Nippon Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002224614	A	20020813	JP 2001-26200	20010202 <--
PRAI JP 2001-26200		20010202	<--	

AB A middle coating, a top base coating, and a top clear coating are applied successively on a substrate precoated with cationic electrodeposition coating with PhMe swelling ratio ≤25% and are cured simultaneously by heating. Thus, adding 147 parts TDI dropwise to a mixture of Epikote 828 633, MeOH 65, MIBK 169, and dibutyltin dilaurate 0.3 part, adding 2 parts Me2NCH2Ph to the mixture, heating with removing byproduct MeOH to form oxazolidone ring, adding p-nonylphenol and MIBK, further heating, adding aminoethylethanolamine ketimine 40, diethanolamine 35, N-methylethanolamine 25, and MIBK 15 parts, and further treating gave a cationic epoxy resin, which was mixed with blocked IPDI 350, an amino-containing acrylic resin 90, and ethylene glycol monohexyl ether 140 parts, and dispersed in H2O with AcOH. A dull steel sheet was treated with Zn phosphate, coated with a cationic electrodeposition coating containing the dispersion, H2O, and a pigment paste, baked, further coated with polyester-amino resin coating (Orga S 90 Sealer Gray), Al-containing acrylic amino resin base (Superlac M 180 Silver), and acrylic melamine resin clear (Superlac O 130 Clear), and baked to form multilayer coating showing good appearance.

IT 133988-63-3DP, quaternized

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
(pigment dispersant; three-coat-one-bake coating on cationic
electrodeposition coating with good appearance)

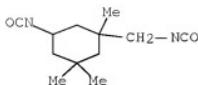
RN 133988-63-3 HCAPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (CA INDEX NAME)

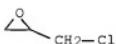
CM 1

CRN 40998-71-9

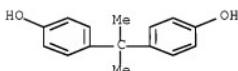
CMF C12 H18 N2 O2



CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

IT 12597-69-2, Steel, uses

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)

(three-coat-one-bake coating on cationic electrodeposition coating with good appearance)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L137 ANSWER 7 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 2002:365012 HCPLUS Full-text

DN 136:342201

TI Method for manufacturing pigment dispersant containing cationic epoxy resins and nonvolatile solvents for cationic electrodeposition coating compositions

IN Takekawa, Masahiro; Ando, Akira; Tsutsui, Keisuke; Shirakawa, Shinsuke; Yamada, Mitsuo

PA Nippon Paint Co., Ltd., Japan

SO Faming Zhanli Shenqing Gongkai Shuomingshu, 15 pp.

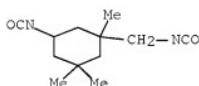
CODEN: CNXXEV

DT Patent

LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CN 1303897	A	20010718	CN 2000-137345	20001130 <--
	JP 2001220540	A	20010814	JP 2000-360902	20001128 <--
	TW 574328	B	20040201	TW 2000-89125363	20001129 <--
	US 2001039307	A1	20011108	US 2000-725754	20001130 <--
	US 6476101	B2	20021105		
	AU 772913	B2	20040513	AU 2000-71943	20001130 <--
PRAI	JP 1999-339103	A	19991130	<--	
AB	Title polymeric dispersant is manufactured by mixing a cationic epoxy resin containing amino, phosphonio and sulfonio groups (prepared from an epoxy resin, an amine, a sulfur or phosphorus compound) with a nonvolatile solvent HO(RO)nQC(CH3)2Q(OR)mOH (I; R = ethylene or propylene; Q = phenylene; n, m ≥1), wherein the nonvolatile solvent is added during or after the cationic epoxy resin is prepared. Thus, 1500 parts main component containing 75/25 amino-modified epoxy resin [obtained from 2,4-/2,6-TDI, bisphenol A-propylene oxide adduct, bisphenol A-type epoxy resin (DER 331J), bisphenol A, diethanolamine, N-ethylmethanolamine and aminoethylmethanolamine ketimine derivative] and Me Et ketoxime-blocked 2,5(6)-bis(isocyanatomethyl)bicyclo[2.2.1]heptane was mixed with 541.7 parts pigment paste containing carbon black, TiO2, Kaolin, aluminum molybdochosphate, bisphenol A-Epikote 829-IPDI copolymer quaternary ammonium salt with dimethylethanolamine lactate and BPE 60 solvent (I, R = ethylene, m + n = 6), 9 parts dibutyltin oxide and deionized water 1949.3, coated on a treated steel panel and baked, showing good flowability and good appearance.				
IT	133988-63-3DP	Bisphenol A-epichlorohydrin-isophorone diisocyanate copolymer, quaternary ammonium salts with dimethylethanolamine lactate RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)			
	(dispersant; method for manufacturing pigment dispersant containing cationic epoxy resins and nonvolatile solvents for cationic electrodeposition coating compns.)				
RN	133988-63-3	HCAPLUS			
CN	Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (CA INDEX NAME)				
CM	1				
CRN	4098-71-9				
CMF	C12 H18 N2 O2				



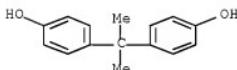
CM 2

CRN 106-89-8

CMF C3 H5 Cl O



CM 3

CRN 80-05-7
CMF C15 H16 O2

L137 ANSWER 8 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 2002:202175 HCPLUS Full-text
 DN 136:249086
 TI Metal plates coated with hexavalent chromium-free anticorrosive layers
 IN Ikishima, Kenji; Takahashi, Masaru; Tomiyasu, Takeshi; Hirayama, Michio;
 Yonetani, Satoru
 PA Sumitomo Metal Industries, Ltd., Japan; Sumitomo Metal Steel Products Inc.
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2002079175	A	20020319	JP 2000-266961	20000904 <--
PRAI JP 2000-266961		20000904 <--		

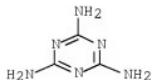
AB The plates are coated with undercoats and topcoats, wherein both coats contain 5-50 volume% ≥1 anticorrosive pigments chosen from phosphoric acid Zn, Al, Mg, Ca, and Ba salts. Thus, a galvanized steel plate was coated with a composition containing Vylon 29CS (OH-terminated polyester), Cymel 303 (I; methylmethoxylated melamine), and 20 volume% Al phosphate, baked, coated with a composition containing Vylon 63CS (OH-terminated polyester), I, and 30 volume% Mg phosphate, and baked, resulting in good bending processability and no blister after salt spray test.

IT 85023-89-8P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (metal plates coated with hexavalent chromium-free anticorrosive layers)

RN 85023-89-8 HCPLUS
 CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

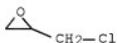
CM 1

CRN 108-78-1
CMF C3 H6 N6



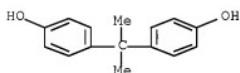
CM 2

CRN 106-89-8
CMF C3 H5 Cl O



CM 3

CRN 80-05-7
CMF C15 H16 O2



CM 4

CRN 50-00-0
CMF C H2 O



L137 ANSWER 9 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 2001:568418 HCPLUS Full-text
 DN 135:154156
 TI Pigment dispersion pastes and their cationic electrodepositing coating compositions
 IN Takekawa, Masahiro; Ando, Akira; Shirakawa, Shinsuke; Yamada, Mitsuo
 PA Nippon Paint Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.
 CODEN: JKXXAF

DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001214118	A	20010807	JP 2000-21706	20000131 <--
PRAI JP 2000-21706		20000131	<--	

AB Title pastes contain carbon black having average diameter of 15-30 nm and pH value (H⁺ concentration on particle surface) of 2.5-4.5. A phosphated steel plate was coated with an aqueous composition (with organic solvent content of 0.5%) containing Bu₂SnO, an aqueous paste (containing 22-nm carbon black with pH of 3.5 and bisphenol A-Epikote 829-IPDI copolymer quaternary ammonium salt with dimethylethanolamine lactate), and an emulsion (containing blocked MDI, HOAc, and a reaction product of diethanolamine, N-ethylethanolamine, aminoethylethanolamine, bisphenol A, DER 331, TDI, and Newpol BP 5P) and baked at 160° for 15 min to form a 20.2-μ thick film with 60° gloss 67% and surface roughness 0.22 μm.

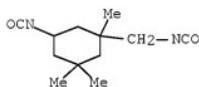
IT 133988-63-3D, Bisphenol A-epichlorohydrin-isophorone diisocyanate copolymer, quaternary ammonium salts with dimethylethanolamine lactate
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
 (in pigment paste; acidic carbon black paste-containing cationic electrodepositions for thick films with high smoothness)

RN 133988-63-3 HCPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (CA INDEX NAME)

CM 1

CRN 4098-71-9
 CMF C12 H18 N2 O2



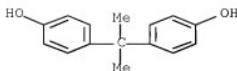
CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7
 CMF C15 H16 O2



L137 ANSWER 10 OF 38 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2001:191833 HCAPLUS [Full-text](#)

DN 134:238973

TI Surface treating method for galvanized steel with polymeric coatings and steel plates treated therewith

IN Nakano, Takashi; Murata, Masahiro; Haruta, Yasuhiko; Sakamoto, Akihisa

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001070878	A	20010321	JP 1999-247236	19990901 <--
PRAI JP 1999-247236		19990901 <--		

AB The method contains (A) applying compns. comprising H₂O 100, acid etchants 0.1-5, and curing agents 0.2-10 parts and (B) further applying OH-containing resin compns., wherein the compns. for step A and/or step B contain sulfonic acid-type catalysts and the compns. for both of the steps contain no chromates nor phosphates. Thus, an aqueous composition comprising phenol-formaldehyde copolymer, H₃PO₄, and p-toluenesulfonic acid was applied on a galvanized steel plate, over-coated with a storage-stable composition comprising bisphenol A epoxy resin (Epikote 1009) and melamine resin (Cymel 303), and cured to give a base coating showing good corrosion resistance and adhesion to topcoats.

IT 7664-38-2, Phosphoric acid, uses

RL: NUU (Other use, unclassified); USES (Uses)
(etchant; surface treating method for galvanized steel plates
with anticorrosive polymeric coatings)

RN 7664-38-2 HCAPLUS

CN Phosphoric acid (CA INDEX NAME)



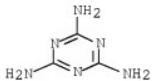
IT 85023-89-8F

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(surface treating method for galvanized steel plates with
anticorrosive polymeric coatings)

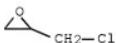
RN 85023-89-8 HCAPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

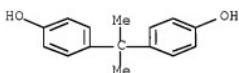
CM 1

CRN 108-78-1
CMF C3 H6 N6

CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

CM 4

CRN 50-00-0
CMF C H2 O

L137 ANSWER 11 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
AN 2001:174357 HCPLUS Full-text

DN 134:224109

TI Method for finishing galvanized steel surfaces with
anticorrosive coatings

IN Murata, Masahiro; Nakano, Takashi; Haruda, Yasuhiko; Sakamoto, Akihisa

PA Kansai Paint Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 8 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2001064781	A	20010313	JP 1999-242579	19990830 <--
PRAI JP 1999-242579		19990830	<--	

AB In the method, the steel surfaces are firstly coated with a solution containing water 100, sulfonic acid-type curing catalysts 0.1-5, and Zn-etchable acids 0.1-5 parts, dried, then over-coated with a solution containing OH-containing resins and curing agents, dried and cured by the same curing catalysts. Thus, a pre-coating composition was obtained from water 850, 10% p-toluenesulfonic acid aqueous solution 50 and 10% phosphoric acid aqueous solution 100%, and an over-coating composition was obtained from Epikote 1009 (bisphenol-epichlorohydrin copolymer) 80, and Cymel 303 (melamine polymer) 20%.

IT 85023-89-8, Bisphenol A-epichlorohydrin-formaldehyde-melamine copolymer

RL: TEM (Technical or engineered material use); USES (Uses)
 (anticorrosive coating; method for finishing galvanized steel surfaces with anticorrosive coatings)

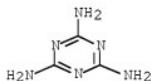
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

CMF C3 H6 N6



CM 2

CRN 106-89-8

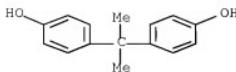
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0
CMF C H2 O $\text{H}_2\text{C}\equiv\text{O}$

IT 7664-38-2, Phosphoric acid, uses

RL: TEM (Technical or engineered material use); USES (Uses)
(surface pre-treatment; method for finishing galvanized steel
surfaces with anticorrosive coatings)

RN 7664-38-2 HCPLUS

CN Phosphoric acid (CA INDEX NAME)



L137 ANSWER 12 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 2000:713076 HCPLUS Full-text

DN 133:310942

TI Zinc-plated and aluminum-plated steel sheets and anticorrosive
coating compositions for their protectionIN Yoshimi, Naoto; Ando, Satoshi; Furuta, Akihiko; Sagiyama, Masaru; Matsuki,
Hiroyasu; Tomita, Kenichi; Haruda, Yasuhiko

PA Nippon Kokan Co., Ltd., Japan; Kansai Paint Co., Ltd.; Jfe Steel Corp.

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
PI JP 2000281946	A	20001010	JP 1999-87455	19990330 <--
JP 3740884	B2	20060201		

PRAI JP 1999-87455 19990330 <--

AB The compns. comprise (A) organic polymers bearing groups derived from
hydrazine derivs. and (B) acids which can etch the Al or Zn surface. Thus,
heating Epikote 828 1870 with bisphenol A 912, tetraethylammonium bromide 2
and MIBK 300 parts at 140° for 4 h, combining the resulting resin with

ethylene glycol monobutyl ether 1500, cooling to 100°, adding 3,5-dimethylpyrazole 96 and Bu2NH 129, heating at 100° until epoxy group disappeared for 6 h, adding MIBK 205 parts while cooling gave a 60% solids solution 100 parts of which was mixed with Takenate B 870N (polyisocyanate) 5, Bu2Sn dilaurate 0.2, fumed silica 20 and FH 1 part to give an anticorrosive coating.

IT 133988-63-3UP, Bisphenol A-epichlorohydrin-isophorone diisocyanate copolymer, modified with hydrazine derivs.

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (zinc-plated and aluminum-plated steel sheets and
 anticorrosive coating compns. for protection)

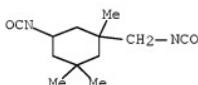
RN 133988-63-3 HCPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (CA INDEX NAME)

CM 1

CRN 4098-71-9

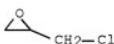
CMF C12 H18 N2 O2



CM 2

CRN 106-89-8

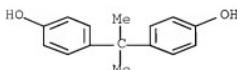
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



L137 ANSWER 13 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 2000:560935 HCPLUS Full-text
 DN 133:165222

TI Water-thinned anticorrosive coating compositions with long pot life and excellent curability and water resistance

IN Sawada, Eisuke; Nakano, Tadashi; Iida, Shinji; Tomita, Kenichi
 PA Kansai Paint Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2000226537	A	20000815	JP 1999-28820	19990205 <--
PRAI JP 1999-28820			19990205 <--	

AB The compns. comprise (A) aqueous emulsions of epoxy resins with epoxy equivalent 100-1000 prepared by using dispersion stabilizers of modified epoxy resins prepared by reaction of polyethylene glycol (Mn 400-20,000), bisphenol-type epoxy resins, compds. having 1 active H in a mol., and compds. having ≥2 active isocyanate groups in a mol., (B) CO₂-containing amine hardeners, and optionally flash rust inhibitors. Thus, polyethylene glycol (Mn 4000) 600, propylene glycol mono-Me ether (I) 13.5, and Epikote 828 (II; epoxy equivalent 190) 380 g were mixed, treated with 52.2 g TDI to NCO value ≤0.5, and diluted with 117 g I to give a dispersion stabilizer resin, 35 parts of which was blended with 65 parts II and emulsified with 100 parts H₂O to give a 50% epoxy resin emulsion. A coating main agent comprising the emulsion 47, Ti white 13, talc 22.85, dispersant 1, defoamer 0.1, antiseptic 0.05, and H₂O 16 parts was mixed 88:12 with Ancamide 365 (modified polyamide amine containing CO₂), applied on a steel sheet, and dried at 20° and relative humidity 65% for 7 days to form a coating showing excellent corrosion and water resistance.

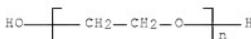
IT 107339-11-7UP, Epikote 828-isophorone diisocyanate-polyethylene glycol copolymer, reaction products with propylene glycol mono-Me ether
 RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)
 (dispersion stabilizer; water-thinned anticorrosive epoxy resin coating compns. with long pot life and good curability and water resistance)

RN 107339-11-7 HCPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, α-hydro-α-hydroxypoly(oxy-1,2-ethanediyl) and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-trimethylcyclohexane (9CI) (CA INDEX NAME)

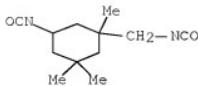
CM 1

CRN 25322-68-3
 CMF (C₂H₄O)_nH₂O
 CCI PMS



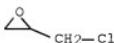
CM 2

CRN 4098-71-9
CMF C12 H18 N2 O2



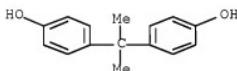
CM 3

CRN 106-89-8
CMF C3 H5 Cl O



CM 4

CRN 80-05-7
CMF C15 H16 O2



IT 12597-69-2, Steel, miscellaneous

RL: MSC (Miscellaneous)

(water-thinned anticorrosive epoxy resin coating compns. with long pot life and good durability and water resistance)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L137 ANSWER 14 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 2000:356576 HCPLUS Full-text

DN 132:350944

TI Steel sheets coated with chromium-free corrosion-resistant organic material

IN Yoshimi, Naoto; Ando, Satoshi; Furuta, Akihiko; Sagiyama, Masaru; Haruda, Yasuhiko; Matsuki, Hiroyasu; Tomita, Kenichi

PA Nippon Kokan Co., Ltd., Japan; Kansai Paint Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 24 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2000144443	A	20000526	JP 1998-332061	19981108 <--
	JP 3397149	B2	20030414		
PRAI	JP 1998-332061		19981108 <--		
AB	Galvanized or Al alloy-plated steel sheets have an organic coating with thickness 0.1-5 µm comprising (1) 100 parts (as solids content) reaction product of (a) organic polymer and (b) active H-containing compound partially or totally composed of hydrazine derivs. and (2) 1-100 parts (as solids content) of (c) ion-exchange SiO ₂ or mixture of (c) with (d) SiO ₂ fine particles at weight ratio of c/d 1/99-99/1, and optionally with (3) 1-80 parts (as solids content) of ≥1 solid lubricant selected from polyolefin wax, paraffin wax, and fluoropolymer micropowder. The organic coating has high adhesion and corrosion resistance and good appearance.				
IT	12609-49-3 52308-11-9 52360-06-2 96539-23-0 112964-43-9 115253-85-5 119412-76-9 142240-64-0				
	RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)				
	(steel plated with; steel sheet with Cr-free corrosion-resistant coating comprising SiO ₂ and reaction product of epoxy resin and hydrazine derivative having active H)				
RN	12609-49-3 HCPLUS				
CN	Aluminum alloy, base, Al 94, Si 6 (CA INDEX NAME)				
Component	Component	Component			
	Percent	Registry Number			
====+=====	=====+=====	=====+=====			
Al	94	7429-90-5			
Si	6	7440-21-3			
RN	52308-11-9 HCPLUS				
CN	Aluminum alloy, base, Al 55, Zn 45 (CA INDEX NAME)				
Component	Component	Component			
	Percent	Registry Number			
====+=====	=====+=====	=====+=====			
Al	55	7429-90-5			
Zn	45	7440-66-6			
RN	52360-06-2 HCPLUS				
CN	Zinc alloy, base, Zn 88, Ni 12 (CA INDEX NAME)				
Component	Component	Component			
	Percent	Registry Number			
====+=====	=====+=====	=====+=====			
Zn	88	7440-66-6			
Ni	12	7440-02-0			
RN	96539-23-0 HCPLUS				
CN	Aluminum alloy, base, Al 70, Mn 30 (CA INDEX NAME)				
Component	Component	Component			
	Percent	Registry Number			
====+=====	=====+=====	=====+=====			
Al	70	7429-90-5			
Mn	30	7439-96-5			

RN 112964-43-9 HCPLUS
 CN Zinc alloy, base, Zn 100,Mg 0.5 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	100	7440-66-6
Mg	0.5	7439-95-4

RN 115253-85-5 HCPLUS
 CN Zinc alloy, base, Zn 100,Co 0.5 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	100	7440-66-6
Co	0.5	7440-48-4

RN 119412-76-9 HCPLUS
 CN Zinc alloy, base, Zn 88,Cr 12 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	88	7440-66-6
Cr	12	7440-47-3

RN 142240-64-0 HCPLUS
 CN Zinc alloy, base, Zn 94,Al 5,Mg 0.5 (CA INDEX NAME)

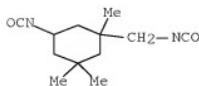
Component	Component Percent	Component Registry Number
Zn	94	7440-66-6
Al	5	7429-90-5
Mg	0.5	7439-95-4

IT 133988-63-3 DDP, reaction products with mercapto-triazole
 RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or
 engineered material use); PREP (Preparation); USES (Uses)
 (steel sheet with Cr-free corrosion-resistant coating
 comprising SiO₂ and reaction product of epoxy resin and hydrazine
 derivative having active H)

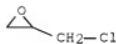
RN 133988-63-3 HCPLUS
 CN Phenol, 4, 4'-(1-methylethylidene)bis-, polymer with 2-
 (chloromethyl)oxirane and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-
 trimethylcyclohexane (CA INDEX NAME)

CM 1

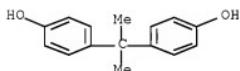
CRN 4098-71-9
 CMF C12 H18 N2 O2



CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

IT 12597-69-2, Steel, properties
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)

(steel sheet with Cr-free corrosion-resistant coating
 comprising SiO₂ and reaction product of epoxy resin and hydrazine
 derivative having active H)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L137 ANSWER 15 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1999:316862 HCPLUS Full-text

DN 130:353705

TI Pre-coat metal plate having good damage resistance, processability and
 durability

IN Yoshida, Yasuhide; Yoshida, Keiji; Yamashita, Masaaki

PA Nippon Kokan Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 11129388	A	19990518	JP 1997-301921	19971104 <--
PRAI JP 1997-301921			19971104 <--	

AB A zinc or zinc-aluminum alloy plated steel plate is coated with a base coating comprising an epoxy resin, an amino resin and/or isocyanate curing agent, and an elastomer microparticle with average diameter 0.01-5 µm wherein the Tg of

the coating film is 20-110°. Thus, a coating from bisphenol A epoxy (Epiclon 4050) 100, curing agent Cymel 303 55, carboxy-modified acrylic rubber (YR 693) microparticle 25 g was coated on a zinc-aluminum alloy-plated steel plate, showing scratch resistance 8H (qualified at ≥6H), processability 2 (qualified at ≤2), impact resistance 30 (qualified at ≥30) and corrosion resistance 20% (qualified at ≤20%).

IT 12597-69-2, Steel, miscellaneous

RL: MSC (Miscellaneous)

(base coating for metal plate having good damage resistance, processability and durability)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 85023-89-8

RL: TEM (Technical or engineered material use); USES (Uses)
(base coating for metal plate having good damage resistance, processability and durability)

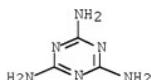
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

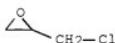
CMF C3 H6 N6



CM 2

CRN 106-89-8

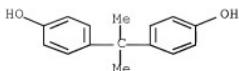
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0
CMF C H₂ OH₂C=O

L137 ANSWER 16 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1998:650767 HCPLUS Full-text

DN 129:303766

TI Resin-coated and hot-dip aluminized steel plates showing good weather resistance, scratch resistance, and processability

IN Mori, Yoichiro; Yamazaki, Makoto; Yonemura, Seiji; Isaki, Teruaki

PA Nippon Steel Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10264307	A	19981006	JP 1997-76153	19970327 <-
PRAI JP 1997-76153		19970327	<-	

AB Al hot-dipped steel plates are chromated and then coated with compns. comprising (A) 50-85% (as solid) acrylic resins from Me methacrylate (I), CH₂:CR1CO₂R2OH (R1 = H, Me; R2 = alkyl), and optionally comonomers (except for styrene), (B) 5-20% epoxy resins, (C) 10-30% melamine resins, (D) 0.5-5% weather (light) stabilizers and optionally (E) thickening agents and/or waxes to give the title steel plates having 2-4.5 μm-thick coating layers. Thus, a hot-dip aluminized steel plate was chromated, coated with a composition comprising a resin mixture (consisting of I-2-hydroxyethyl methacrylate copolymer 70, butylated melamine resin 20, and bisphenol A-type epoxy resin 10%) and 1% weather stabilizers (hindered amine-based and benzotriazole-based), and baked to give a test piece showing good processability and weather resistance.

IT 12597-69-2, Steel, processes

RL: PEP (Physical, engineering or chemical process); PROC (Process)
(chromated; hot-dip aluminized steel plates having resin
coating layers containing weather stabilizers and optionally lubricants)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 85023-89-8P, Bisphenol A-epichlorohydrin-melamine-formaldehyde copolymer

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP

(Preparation); USES (Uses)

(hot-dip aluminized steel plates having resin coating layers containing weather stabilizers and optionally lubricants)

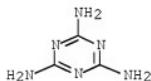
RN 85023-89-8 HCAPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

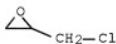
CMF C3 H6 N6



CM 2

CRN 106-89-8

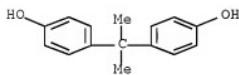
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0

CMF C H2 O



L137 ANSWER 17 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 1998:115749 HCPLUS Full-text
 DN 128:205992

TI Anticorrosive weldable prepainted steel plates with excellent
 powdering resistance and coatability

IN Yoshimi, Naoto; Urata, Kasuya; Yamashita, Masaaki; Haruda, Yasuhiko
 PA Nippon Kokan Co., Ltd., Japan; Kansai Paint Co., Ltd.
 SO Jpn. Kokai Tokkyo Koho, 30 pp.

CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 10043677	A	19980217	JP 1996-223036	19960806 <--
PRAI JP 1996-223036		19960806		<--

AB Zinc-plated steel plates for automobile bodies are imparted a chromate layer
 then a 1.0-30 μm -thick layer of compns. from (A) a base resin comprising 100
 parts epoxy resins, modified epoxy resins, and/or polyhydroxy polyether resins
 and 5-80 parts isocyanate compds., (B) corrosion-preventing additives chosen
 from silica and water-insol. chromate salts at A/B = 99/1~50/50; (C) solid
 lubricants in an amount of 0.1-30 part to 100 parts A + B and B/20 \leq C \leq B +
 20; and (D) elec. conductive additives chosen from metals and alloys, elec.
 conductive carbon, iron phosphide, carbides, nitrides, and semiconductive
 oxides at 5 \leq [D/(A + B + C + D)] \times 100 \leq 70 in volume% based on the film-
 forming solids. A coating comprised Phenox Tohoku YP-50 100, MIBK oxime-blocked
 IPDI 5, and dibutyltin dilaurate 0.2 part.

IT 133988-63-3P 184015-79-0P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (anticorrosive weldable prepainted steel plates with excellent
 powdering resistance and coatability)

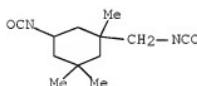
RN 133988-63-3 HCPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-
 (chloromethyl)oxirane and 5-isocyanato-1-(isocyanatomethyl)-1,3,3-
 trimethylcyclohexane (CA INDEX NAME)

CM 1

CRN 4098-71-9

CMF C12 H18 N2 O2



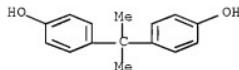
CM 2

CRN 106-89-8

CMF C3 H5 Cl O



CM 3

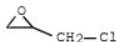
CRN 80-05-7
CMF C15 H16 O2RN 184015-79-0 HCPLUS
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane
and Duranate TPA 100 (9CI) (CA INDEX NAME)

CM 1

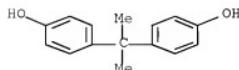
CRN 134498-50-3
CMF Unspecified
CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

IT 12433-50-0, ZPC 49663-84-5, ZTO

RL: MOA (Modifier or additive use); USES (Uses)
 (anticorrosive weldable prepainted steel plates with excellent
 powdering resistance and coatability)

RN 12433-50-0 HCAPLUS

CN Potassium zinc chromate oxide (K₂Zn₄(CrO₄)₄O) (CA INDEX NAME)

Component	Ratio	Component	
			Registry Number
O	1		17778-80-2
CrO ₄	4		13907-45-4
Zn	4		7440-66-6
K	2		7440-09-7

RN 49663-84-5 HCAPLUS

CN Zinc chromate hydroxide (Zn₅(CrO₄)(OH)₈) (CA INDEX NAME)

Component	Ratio	Component	
			Registry Number
HO	8		14280-30-9
CrO ₄	1		13907-45-4
Zn	5		7440-66-6

L137 ANSWER 18 OF 38 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1997:618910 HCAPLUS [Full-text](#)

DN 127:279347

TI Aqueous epoxy resin compositions with long pot life for adhesives and coatings

IN Sawada, Hidenori; Tomita, Kenichi; Shimada, Shinichi; Hamamura, Toshihiro; Nakaya, Toshikazu; Nishida, Reijiro

PA Kansai Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09241482	A	19970916	JP 1996-56512	19960313 <--
	JP 3720899	20051130		

PRAI JP 1996-56512 19960313 <--

AB Title compns. comprise (I) aqueous epoxy hardeners containing (A) amine-modified epoxy resins prepared from polyethylene glycol [I; number-average mol. weight (Mn) 400-20,000], bisphenol-type epoxy resins, compds. having 1 active H (/mol.), compds. having ≥2 active NCO (/mol.), and active-H-containing amines, (B) active-H-containing hydrophobic polyamines, and (II) epoxy resin aqueous dispersions. Thus, 0.15 mol I (Mn 4,000) was treated with 0.15 mol propylene glycol monomethyl ether (II) 1 mol Epikote 828 at 100° and then with 0.3 mol TDI at 120° to NCO index ≤0.5, diluted with II to give an epoxy resin (E1), which was modified with 1.738 mol Pr2NH to give A, while 35 parts E1 was blended with 65 parts Epikote 828 and 100 parts H2O to give a dispersion (II-1). Then, 34 parts 30:70:100 (%) A/Epicure H 55 (polyamine)/H2O was blended with 66 parts II-1 to give title composition, which was applied on a soft steel plate and dried to give a coating film showing no corrosion nor blisters in salt spray test (JIS Z 2371), gel fraction ≥71 % in 24-h immersion in 20° THF, and excellent resistance in DuPont falling weight impact test.

IT 196791-35-2P 196791-36-3P 196791-37-4P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (hardener; aqueous epoxy resin compns. containing amine-modified epoxy hardeners with long pot life)

RN 196791-35-2 HCPLUS

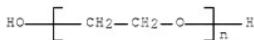
CN Phenol, 4, 4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene, α -hydro- ω -hydroxypoly(oxy-1,2-ethanediyl) and N-propyl-1-propanamine (9CI) (CA INDEX NAME)

CM 1

CRN 25322-68-3

CMF (C2 H4 O)n H2 O

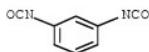
CCI PMS



CM 2

CRN 123-61-5

CMF C8 H4 N2 O2



CM 3

CRN 108-18-9

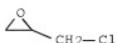
CMF C6 H15 N



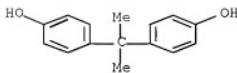
CM 4

CRN 106-89-8

CMF C3 H5 Cl O



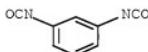
CM 5

CRN 80-05-7
CMF C15 H16 O2

RN 196791-36-3 HCPLUS

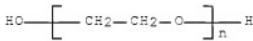
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane,
1,3-diisocyanatomethylbenzene, ethanol, α -hydro- ω -
hydroxypoly(oxy-1,2-ethanediyl) and N-propyl-1-propanamine (9CI) (CA
INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS

D1-Me

CM 2

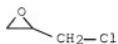
CRN 25322-68-3
CMF (C2 H4 O)n H2 O
CCI PMS

CM 3

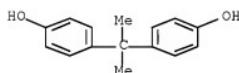
CRN 142-84-7
CMF C6 H15 N

n-Pr-NH-Pr-n

CM 4

CRN 106-89-8
CMF C3 H5 Cl O

CM 5

CRN 80-05-7
CMF C15 H16 O2

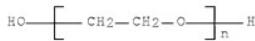
CM 6

CRN 64-17-5
CMF C2 H6 O

RN 196791-37-4 HCPLUS

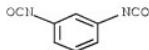
CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane,
1,3-diisocyanatomethylbenzene, α -hydro- ω -hydroxypoly(oxy-1,2-
ethanediyl) and 2,2'-iminobis[ethanol] (9CI) (CA INDEX NAME)

CM 1

CRN 25322-68-3
CMF (C₂ H₄ O)_n H₂ O
CCI PMS

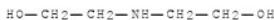
CM 2

CRN 123-61-5
CMF C8 H4 N2 O2



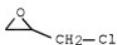
CM 3

CRN 111-42-2
CMF C4 H11 N O2



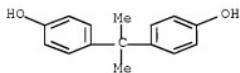
CM 4

CRN 106-89-8
CMF C3 H5 Cl O



CM 5

CRN 80-05-7
CMF C15 H16 O2



L137 ANSWER 19 OF 38 HCAPLUS COPYRIGHT 2007 ACS on STN
AN 1997:618530 HCAPLUS Full-text

DN 127:263978

TI Epoxy-melamine-coated cured laminate films, metal plates laminated with them, and metal containers molded from the plate

IN Kuze, Katsuro; Igushi, Hidemoto; Ota, Saburo; Nagano, Hiromu; Isaka, Tsutomu

PA Toyobo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent
 LA Japanese
 FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09239938	A	19970916	JP 1996-53561	19960311 <--
JP 3845892	B2	20061115		
PRAI JP 1996-53561		19960311 <--		

AB The films comprise thermoplastic film substrates laminated with cured heat-resistant layers containing cured reaction products of bisphenol A skeleton having epoxy resins and melamines to show the following formulas by surface IR absorption anal.: $0.3 \leq Pt/Pb \leq 3.0$; $Pe/Pt \leq 0.25$ (Pt = absorbance of triazine ring peak at $\approx 1550 \text{ cm}^{-1}$, Pb = absorbance of bisphenol A skeleton peak at $\approx 830 \text{ cm}^{-1}$, Pe = absorbance of epoxy ring peak at $\approx 910 \text{ cm}^{-1}$). The metal plates are laminated with the above films. The metal containers, useful for beverages, beers, and canned foods, are obtained by molding the above plates into cans to face the cured heat-resistant layers outside. Thus, a coating containing bisphenol A epoxy resin 50, polyester 30, hexamethoxymethylolemelamine 20, p-MeC₆H₄SO₃H 0.5, silicones 1, polyethylene wax 0.2, and fluoropolymer 0.2 part was applied on a film from 96% poly(ethylene terephthalate) (I) and 4% I-polytetramethylene glycol block copolymer, dried at 100°, and cured at 175° to give a laminate film with Pt/Pb 1.2, Pe/Pt 0.27, good abrasion resistance, lubricity, which was corona discharge-treated and printed on the other side, and laminated on a steel plate via an adhesive layer at the printed face to give a laminated plate. The plate was molded into cans with good appearance, and abrasion, heat, and moisture resistances.

IT 85023-89-8P, Bisphenol A-epichlorohydrin-formaldehyde-melamine copolymer

RL: IMF (Industrial manufacture); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (cured epoxy-melamine-coated laminate films, metal plates laminated with them, and metal containers molded from the plate)

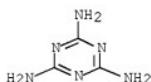
RN 85023-89-8 HCAPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethyldene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

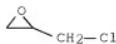
CMF C3 H6 N6



CM 2

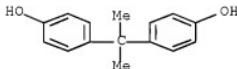
CRN 106-89-8

CMF C3 H5 Cl O



CM 3

CRN 80-05-7
 CMF C15 H16 O2



CM 4

CRN 50-00-0
 CMF C H₂ O

H₂C=O

IT 12597-69-2, Steel, uses
 RL: PRP (Properties); TEM (Technical or engineered material use); USES
 (Uses)
 (cured epoxy-melamine-coated laminate films, metal plates laminated
 with them, and metal containers molded from the plate)
 RN 12597-69-2 HCPLUS
 CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L137 ANSWER 20 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1997:618508 HCPLUS Full-text

DN 127:279328

TI Thermoplastic laminate films having cured heat-resistant layers, metal
 plates laminated with them, and metal containers molded from the plates
 IN Kuze, Katsuro; Shimizu, Hideki; Ota, Saburo; Nagano, Hiromu; Isaka,
 Tsutomu

PA Toyobo Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09239916	A	19970916	JP 1996-56431	19960313 <--
JP 3092507	B2	20000925		
JP 11179848	A	19990706	JP 1998-281486	19981002 <--

JP 3758380 B2 20060322
 PRAI JP 1996-56431 A3 19960313 <--

AB The films comprise thermoplastic film substrates laminated with cured heat-resistant layers such that the product (X) of abrasion-resistance index (AI) and static friction coefficient (SF) is ≤ 0.13. Metal plates are laminated with these films. The metal containers, useful for beverages, beer, and canned foods, are obtained by molding the plates into cans so that the cured heat-resistant layers face the outside. Thus, a coating containing bisphenol A epoxy resin 55, polyester 30, hexakis(methoxymethyl)melamine 15, p-MeC₆H₄SO₃H 0.7, silicones 1, polyethylene wax 0.2, and fluoropolymer 0.2 part was applied at 1 g/m² on a 12-μm biaxially stretched film from 96% poly(ethylene terephthalate) (I) and 4% I-polytetramethylene glycol block copolymer, dried at 95°, and cured at 180° to give a laminated film with AI 0.1%, SF 0.11, and X 0.011, and good transparency and lubricity, which was corona discharge-treated and printed on the other side, and laminated on a steel plate via an adhesive layer at the printed face to give a laminated plate. The plate was molded into cans with good appearance, and abrasion, heat, and moisture resistance.

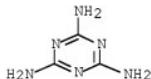
IT 85923-89-8P, Bisphenol A-epichlorohydrin-formaldehyde-melamine copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (cured epoxy-melamine-coated laminate films, metal plates laminated with them, and metal containers molded from the plate)

RN 85023-89-8 HCPLUS
 CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethyldiene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

CMF C3 H6 N6



CM 2

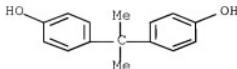
CRN 106-89-8

CMF C3 H5 Cl O



CM 3

CRN 80-05-7
CME C15 H16 O2



CM 4

CRN 50-00-0
CME C H2 O

H₂C=O

IT 12597-69-2, Steel, uses
RL: PRP (Properties); TEM (Technical or engineered material use); USES (Uses)
(cured epoxy-melamine-coated laminate films, metal plates laminated with them, and metal containers molded from the plate)
RN 12597-69-2 HCPLUS
CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L137 ANSWER 21 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
AN 1997:207091 HCPLUS [Full-text](#)

DN 126:200744

TI Fluororesin-based coating compositions and weather-resistant stainless steel plates coated with them

IN Ikushima, Kenji; Imai, Kazuhito; Yoshida, Kiwamu

PA Sumitomo Metal Industries, Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09012967	A	19970114	JP 1995-162312	19950628 <--
PRAI JP 1995-162312		19950628	<--	
AB Title compns. comprise 5-20% epoxy resins, 1-10% crosslinking agents, 20-80% acrylic resins, 20-80% fluororesins, and optionally 0.05-5 phr crosslinking catalysts and 0.01-5 phr silane coupling agents. Coated stainless steel plates useful for building materials are obtained by coating undercoated stainless steel plates with the compns. Thus, a composition comprising Epiclon 7050 10, Super-Beckamine J 820 2, Hipet HPS (acrylic resin) 20, Kynar 500 68, p-toluenesulfonic acid 0.05, and Tipaque R 820 100 parts was applied on a chromated SUS 304 plate, baked, and cooled to form a coating layer showing cross-cut adhesion 100/100 after 24 h in boiling water, pencil hardness H, gloss retention 95% and discoloration resistance after 1000-h weathering test, and good bending resistance.				

IT 85023-39-8P, Bisphenol A-epichlorohydrin-formaldehyde-2,4,6-triamino-s-triazine copolymer
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (weather-resistant coatings containing acrylic resins, epoxy resins and fluororesins for stainless steel)

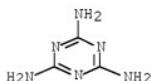
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

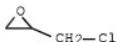
CMF C3 H6 N6



CM 2

CRN 106-89-8

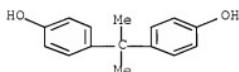
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0

CMF C H2 O

H2C=O

IT 12597-68-1, Stainless steel, miscellaneous
 RL: MSC (Miscellaneous)
 (weather-resistant coatings containing acrylic resins, epoxy resins and
 fluororesins for stainless steel)
 RN 12597-68-1 HCPLUS
 CN Stainless steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L137 ANSWER 22 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1997:107263 HCPLUS Full-text

DN 126:119149

TI Anticorrosive and press-moldable organic composite-coated steel
 panels

IN Urata, Kazuya; Yoshimi, Naoto; Kubota, Takahiro; Yamashita, Masaaki; Sato,
 Kentaro; Haruta, Yasuhiko

PA Nippon Kokan Kk, Japan; Kansai Paint Co Ltd

SO Jpn. Kokai Tokkyo Koho, 55 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08318218	A	19961203	JP 1996-60130	19960222 <--
	B2	20011112		

PRAI JP 1995-86313 A 19950317 <--

AB Title panels are prepared by forming chromate films on Zn (alloy)-plated steel
 panels (A) to a Cr thickness of 5-200 mg/m² and covering with organic compns.
 containing 3-50% anticorrosive agents and 30-80% polymers consisting of 100
 parts OH- or COOH-containing base polymers (excluding epoxy resins end
 modified by basic N and ≥2 primary OH groups) and 5-80 parts polyisocyanates
 to a thickness of between 3.0 µm and 0.1 + (Ra + 2) (Ra = average roughness of
 the A panels). A a Ni/Zn alloy-plated steel panel with a Ra 1.0 µm was
 chromated to a 50-µm Cr, covered with a composition containing a Sn catalyst,
 100 parts Epikote 1007, 25 parts Duranate MF-B 80M (blocked hexafunctional
 derivative of HMDI), polyethylene wax, BaCrO₄, and SrCrO₄ to a 0.8-µm
 thickness, and baked at 140° to form a plate showing good coating adhesion,
 anticorrosion, lubricity, processability, and powdering resistance.

IT 185914-55-0P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (anticorrosive filler-containing resin coatings on chromated and zinc
 alloy-plated steel)

RN 185914-55-0 HCPLUS

CN Phenol, 4, 4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane,
 1,3-diisocyanatomethylbenzene, Duranate TPA 100 and α-
 (oxiranylmethyl)-ω-(oxiranylmethoxy)poly(oxy-1,2-ethanediyl) (9CI)
 (CA INDEX NAME)

CM 1

CRN 134498-50-3

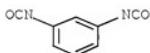
CMF Unspecified

CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

CM 2

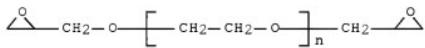
CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



D1-Me

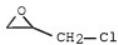
CM 3

CRN 26403-72-5
 CMF (C₂ H₄ O)_n C₆ H₁₀ O₃
 CCI PMS



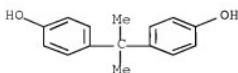
CM 4

CRN 106-89-8
 CMF C₃ H₅ Cl O



CM 5

CRN 80-05-7
 CMF C₁₅ H₁₆ O₂



IT 12597-69-3, Steel, miscellaneous

RL: MSC (Miscellaneous)

(anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 52360-06-2 68493-54-9 118889-49-9

119412-76-9 152259-57-9

RL: TEM (Technical or engineered material use); USES (Uses)

(anticorrosive filler-containing resin coatings on chromated and zinc alloy-plated steel)

RN 52360-06-2 HCPLUS

CN Zinc alloy, base, Zn 88,Ni 12 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number

Zn	88	7440-66-6
Ni	12	7440-02-0

RN 68493-54-9 HCPLUS

CN Aluminum alloy, base, Al 55,Zn 43,Si 1.6 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number

Al	55	7429-90-5
Zn	43	7440-66-6
Si	1.6	7440-21-3

RN 118889-49-9 HCPLUS

CN Zinc alloy, base, Zn 94,Al 5,Mo 0.5 (9CI) (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number

Zn	94	7440-66-6
Al	5	7429-90-5
Mo	0.5	7439-98-7

RN 119412-76-9 HCPLUS

CN Zinc alloy, base, Zn 88,Cr 12 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number

Zn	88	7440-66-6
Cr	12	7440-47-3

RN 152259-57-9 HCPLUS

CN Zinc alloy, base, Zn 86,Cr 12,Ni 2 (9CI) (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number

Zn	86	7440-66-6
Cr	12	7440-47-3
Ni	2	7440-02-0

L137 ANSWER 23 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1997:60943 HCPLUS Full-text

DN 126:76218

TI Pre-primed steel panels with good adhesion, anticorrosion, powdering resistance, and coatability

IN Yoshimi, Naoto; Urata, Kazuya; Kubota, Takahiro; Yamashita, Masaaki

PA Nippon Kokan Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 36 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08276154	A	19961022	JP 1995-103149	19950404 <--
	JP 3304235	B2	20020722	

PRAI JP 1995-103149 19950404 <--

AB Title panels are prepared by coating chromated (1-500 mg/m² Cr) Zn (alloy)-plated steel panels with (modified)epoxy resins and 0.1-30 phr solid lubricants to thickness of 1.0-30 µm. A chromated galvanized steel panel was coated with a composition containing anticorrosive additives, Phenox Tohoto YP 50-6:1 IPDI/sorbitol adduct copolymer, silica, and Luvax 115 lubricant and baked to form title panel.

IT 11149-84-1

RL: MSC (Miscellaneous)

(0.5% Mo-containing, platings; solid lubricant-containing epoxy resin primers

on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)

RN 11149-84-1 HCPLUS

CN Aluminum alloy, nonbase, Al,Zn (CA INDEX NAME)

Component Component
Registry Number

Al	7429-90-5
Zn	7440-66-6

IT 37346-11-5 52975-39-0 54134-51-9

74750-92-8

RL: MSC (Miscellaneous)

(platings; solid lubricant-containing epoxy resin primers on chromated and zinc alloy-plated steel for corrosion/powdering resistance and coatability)

RN 37346-11-5 HCPLUS

CN Nickel alloy, nonbase, Ni,Zn (CA INDEX NAME)

Component Component
Registry Number

Ni	7440-02-0
Zn	7440-66-6

RN 52975-39-0 HCPLUS

CN Manganese alloy, nonbase, Mn,Zn (CA INDEX NAME)

Component Component
Registry Number

Mn 7439-96-5
 Zn 7440-66-6

RN 54134-51-9 HCAPLUS
 CN Chromium alloy, nonbase, Cr,Zn (CA INDEX NAME)

Component Component
 Registry Number
 =====+=====
 Cr 7440-47-3
 Zn 7440-66-6

RN 74750-92-8 HCAPLUS
 CN Chromium alloy, nonbase, Cr,Ni,Zn (9CI) (CA INDEX NAME)

Component Component
 Registry Number
 =====+=====
 Cr 7440-47-3
 Ni 7440-02-0
 Zn 7440-66-6

IT 184015-79-0P
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM
 (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (solid lubricant-containing epoxy resin primers on chromated and zinc
 alloy-plated steel for corrosion/powdering resistance and
 coatability)

RN 184015-79-0 HCAPLUS
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane
 and Duranate TPA 100 (9CI) (CA INDEX NAME)

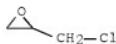
CM 1

CRN 134498-50-3
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

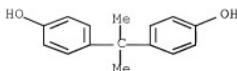
CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7
 CMF C15 H16 O2



L137 ANSWER 24 OF 38 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 1996:751529 HCAPLUS Full-text

DN 126:20196

TI Corrosion-resistant steel coated with organic composites and useful for automobile bodies

IN Yoshimi, Naoto; Kubota, Takahiro; Yamashita, Masaaki

PA Nippon Kokan Kk, Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 08252527	A	19961001	JP 1995-84740	19950316 <--
	JP 3259584	20020225		
PRAI JP 1995-84740		19950316 <--		
AB Zinc-plated steel is chromated 5-200 mg/m ² , coated with solvents containing (A) bisphenol epoxy resins having number-average-mol. weight 300-100,000 100, (B) polyisocyanate crosslinking agents having ≥3 NCO groups/mol. 5-80, (C) a polyethylene wax 0.1-10 parts, and (D) rustproofing additives at (A + B)/D 90/10-40/60, and dried to coating thickness 0.2-3 µm. Thus, steel plated with 12:88 Ni-Zn was chromated and coated with cyclohexanone containing Epikote 1007, a reaction product of IPDI with Me Et ketoxime and sorbitol, Aerosil R811, Ba chromate, and a polyethylene wax.				

IT 52360-06-2 88120-60-9 97365-06-5

118889-49-9 152259-57-9

RL: TEM (Technical or engineered material use); USES (Uses)
 (plating; zinc-plated chromated steel coated with epoxy
 resins containing rustproofing agents and polyethylene wax for automobile
 bodies)

RN 52360-06-2 HCAPLUS

CN Zinc alloy, base, Zn 88,Ni 12 (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	88	7440-66-6
Ni	12	7440-02-0

RN 88120-60-9 HCAPLUS

CN Zinc alloy, base, Zn 85,Fe 15 (9CI) (CA INDEX NAME)

Component	Component	Component
	Percent	Registry Number
Zn	85	7440-66-6
Fe	15	7439-89-6

RN 97365-06-5 HCAPLUS

CN Manganese alloy, base, Mn 60,Zn 40 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Mn	60	7439-96-5
Zn	40	7440-66-6

RN 118889-49-9 HCPLUS
 CN Zinc alloy, base, Zn 94, Al 5, Mo 0.5 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	94	7440-66-6
Al	5	7429-90-5
Mo	0.5	7439-98-7

RN 152259-57-9 HCPLUS
 CN Zinc alloy, base, Zn 86, Cr 12, Ni 2 (9CI) (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	86	7440-66-6
Cr	12	7440-47-3
Ni	2	7440-02-0

IT 37224-57-0, Zinc potassium chromate
 RL: MOA (Modifier or additive use); USES (Uses)
 (rustproofing agents; zinc-plated chromated steel coated with
 epoxy resins containing rustproofing agents and polyethylene wax for
 automobile bodies)

RN 37224-57-0 HCPLUS
 CN Chromium potassium zinc oxide (9CI) (CA INDEX NAME)

Component	Ratio	Component	Registry Number
O	x		17778-80-2
Zn	x		7440-66-6
Cr	x		7440-47-3
K	x		7440-09-7

IT 184015-79-0P
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material
 use); PREP (Preparation); USES (Uses)
 (zinc-plated chromated steel coated with epoxy resins containing
 rustproofing agents and polyethylene wax for automobile bodies)

RN 184015-79-0 HCPLUS
 CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane
 and Duranate TPA 100 (9CI) (CA INDEX NAME)

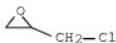
CM 1

CRN 134498-50-3
 CMF Unspecified
 CCI PMS, MAN

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

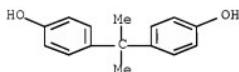
CM 2

CRN 106-89-8
 CMF C3 H5 Cl O



CM 3

CRN 80-05-7
 CMF C15 H16 O2



IT 119412-76-9

RL: TEM (Technical or engineered material use); USES (Uses)
 (zinc-plated chromated steel coated with epoxy resins containing
 rustproofing agents and polyethylene wax for automobile bodies)

RN 119412-76-9 HCPLUS

CN Zinc alloy, base, Zn 88, Cr 12 (CA INDEX NAME)

Component	Component Percent	Component Registry Number
Zn	88	7440-66-6
Cr	12	7440-47-3

L137 ANSWER 25 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1995:926311 HCPLUS Full-text

DN 124:58348

TI Plastic-laminated metal sheets and their manufacture

IN Kojima, Shunji; Kobayashi, Seishichi

PA Kishimoto Akira, Japan

SO Jpn. Kokai Tokkyo Koho, 11 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 07205370	A	19950808	JP 1994-625	19940107 <--
JP 2903989	B2	19990614		
PRAI JP 1994-625		19940107 <--		

AB The title sheets, with good adhesion, processability, and corrosion resistance, useful for seamless cans, etc., are prepared by continuously laminating 70-99:1-30 mixts. of bisphenol-type epoxy resins with weight-

average mol. weight >70,000 (e.g., bisphenol A-Epikote 828 copolymer) and methylol-containing hardeners (e.g., Tamanol 903, Cymel 303, phenolic resins) on metal sheets (e.g., chromate-treated steel sheet).

IT 12597-69-2, Steel, uses

RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)
(chromated sheets; plastic-laminated metal sheets and their manufacture)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 85923-89-8

RL: PEP (Physical, engineering or chemical process); PRP (Properties);
PROC (Process)
(plastic-laminated metal sheets and their manufacture)

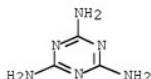
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

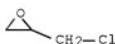
CMF C3 H6 N6



CM 2

CRN 106-89-8

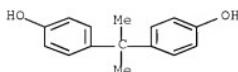
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0
CMF C H₂ OH2C=O

L137 ANSWER 26 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1994:703141 HCPLUS Full-text

DN 121:303141

TI Epoxy resin compositions for coatings for metals

IN Hosono, Takayoshi; Takeda, Yasuyuki

PA Toto Kasei KK, Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 06172490	A	19940621	JP 1992-329654	19921209 <--
PRAI JP 1992-329654		19921209		<--

AB The title compns. contain curing agents and solid epoxy resins (number-average mol. weight 900-10,000) prepared by reacting phenols with liquid epoxy resins containing dispersed incompatible acrylic rubber particles (<2 µm; glass temperature below room temperature). A liquid epoxy resin (YD 128) containing dispersed particles of 25:67:2:6 acrylonitrile-butadiene-divinylbenzene-methacrylic acid copolymer was reacted with bisphenol A to give a solid epoxy resin which was dissolved in a mixture of Et 3-ethoxypropionate, iso-BuCO₂, and cyclohexanone, mixed with Super-Beckamine J 820-60 and p-MeC₆H₄SO₃H, and coated on steel to give flexible coatings showing cross-cut adhesion 10/10, pencil hardness 3H, and good resistance to boiling water.

IT 12597-69-2, Steel, miscellaneous

RL: MSC (Miscellaneous)

(epoxy resins containing acrylic rubber particles for water-resistant flexible coatings on)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 85023-69-8

RL: USES (Uses)

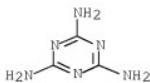
(in metal coatings with flexibility and resistance to boiling water)

RN 85023-69-8 HCPLUS

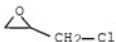
CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

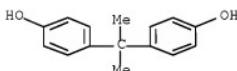
CRN 108-78-1
CMF C₃ H₆ N₆



CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

CM 4

CRN 50-00-0
CMF C H2 O $\text{H}_2\text{C}\equiv\text{O}$

L137 ANSWER 27 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 1993:519657 HCPLUS Full-text
 DN 119:119657
 TI Metal surface treatment agents and manufacture thereof
 IN Yoshimi, Michinari; Tawara, Kunio; Okuyama, Toshio; Ishizaki, Kenichi;
 Kato, Hideki
 PA Toa Gosei Chemical Industry Co., Ltd., Japan
 SO Jpn. Kokai Tokkyo Koho, 13 pp.
 CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 1
 PATENT NO. KIND DATE APPLICATION NO. DATE

PI JP 05001391 A 19930108 JP 1991-177528 19910621 <--
 PRAI JP 1991-177528 19910621 <--

AB The title compns. providing lasting scratch and corrosion prevention and good adhesion as undercoatings contain OH group-containing resins and silica by sol-gel process. A composition showing good performance on chromate-treated galvanized steel comprised 1:1 xylene-cyclohexanone 490, S-Lec BLM poly(vinyl butyral) 100, sol-gel silica 100, and U-Van 22R 40 parts.

IT 85023-89-8

RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, containing sol-gel silica, anticorrosive, scratch-resistant, for steel)

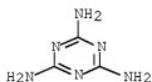
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

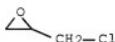
CMF C3 H6 N6



CM 2

CRN 106-89-8

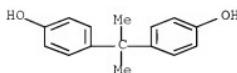
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0
 CMF C H2 O

H₂C=O

L137 ANSWER 28 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 1990:425649 HCPLUS Full-text
 DN 113:25649
 TI Anticorrosive metallic coatings containing epoxy resins and/or vinyl chloride polymers
 IN Savin, Ronald R.
 PA USA
 SO U.S., 9 pp. Cont.-in-part of U.S. Ser. No. 73,981, abandoned.
 CODEN: USXXAM
 DT Patent
 LA English
 FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 4891394	A	19900102	US 1988-182529	19880418 <--
FR 2602239	A1	19880205	FR 1986-11238	19860730 <--
FR 2602239	B1	19881007		
PRAI FR 1986-11238	A	19860730	<--	
US 1987-73981	B2	19870716	<--	

AB The title compns. comprise 10-20% epoxy resins (epoxy equivalent 250-2500) and/or vinyl chloride polymers and polyisocyanates or melamine resins, 3-60% powdered Zn, 10-25% elec. conductivity control agents containing crystalline SiO₂ [oil adsorption (ASTM D 281-84) ≤20]; 2-3% rheol. control agents, and ≤25% solvents. Thus, coating steel with 2.5-5 mil a mixture of Epon 1001F (epoxy resin) 11.20, Zn dust 44.18, novaculite (conductivity control agent) mine resin 8.26, and organic solvents 19.20% and baking at 300-350° F for 20 min gave a coating with corrosion resistance 3000 h and good adhesion, flexibility, and oil resistance (1 mo).

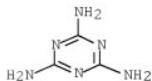
IT 85023-89-8
 RL: USES (Uses)
 (anticorrosive coatings, containing zinc dust)

RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

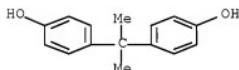
CRN 108-78-1
 CMF C3 H6 N6



CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

CM 4

CRN 50-00-0
CMF C H2 O

L137 ANSWER 29 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1989:214800 HCPLUS Full-text

DN 110:214800

TI High-speed ion-implantation process for forming patterned coatings on sheet metal

IN Nomura, Tadashige; Osada, Koichi

PA Nippon Paint Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 63256167	A	19881024	JP 1987-89600	19870410 <--
PRAI JP 1987-89600		19870410 <--		

AB Durable coatings are formed at high speeds by coating sheet metal with an insulating layer having resistivity (ρ) $\geq 10^9 \Omega\text{-cm}$, using a corona discharge or elec. conductive brushes to apply electrostatic charge to the coating, contacting parts of the coating with grounded electrodes to selectively remove

the charge, then contacting the coating with a powdered developer (which may be dispersed in a nonconducting solvent with low dielec. constant), and baking. Thus, steel sheets 0.5 mm thick were coated with a solution of Epikote 1004 and Cymel 303 in MIBK, and dried to form a 30- μ m coating having ρ 1014 $\Omega\text{-cm}$, which was passed at 200 mm/s through a Corotron operating at 6 kV to pos. charge the surface, then contacted with grounded electrodes 5 mm wide to form a striped pattern of charged and uncharged areas, coated with Powdax P 60 White (polyester powder coating) charged at -20 kV, sprayed with compressed air to dislodge the powder from the uncharged stripes, and baked 90 s at 230°. The resulting striped coating showed good adhesion and salt spray corrosion resistance.

IT 95023-89-8 Bisphenol A-epichlorohydrin-formaldehyde-melamine copolymer

RL: USES (Uses)

(primers, for electrostatically applied patterned coil coatings on sheet metal)

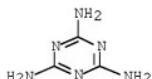
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

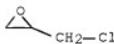
CMF C3 H6 N6



CM 2

CRN 106-89-8

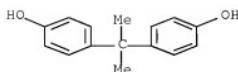
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0
CMF C H₂ OH₂C=O

L137 ANSWER 30 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1989:77642 HCPLUS Full-text

DN 110:77642

TI Emulsion type water paint, process for its production, and process for applying same

IN Kojima, Shunji; Watanabe, Yoshiki; Goto, Hiroaki; Moriga, Toshinori

PA Toyo Seikan Kaisha, Ltd., Japan

SO PCT Int. Appl., 63 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8805455	A1	19880728	WO 1988-JP64	19880127 <--
	W: DK, SE, US				
	JP 63183968	A	19880729	JP 1987-15146	19870127 <--
	JP 07026041	B	19950322		
	JP 63183969	A	19880729	JP 1987-15147	19870127 <--
	JP 06045769	B	19940615		
	JP 63236576	A	19881003	JP 1987-69176	19870325 <--
	JP 03017751	B	19910308		
	JP 63275675	A	19881114	JP 1987-109727	19870507 <--
	JP 06072217	B	19940914		
	SE 8803417	A	19880927	SE 1988-3417	19880927 <--
	DK 8805365	A	19881125	DK 1988-5365	19880927 <--
	US 5087645	A	19920211	US 1988-272838	19881117 <--
	US 5068266	A	19911126	US 1989-426351	19891025 <--
	US 5110847	A	19920505	US 1990-632681	19901224 <--
PRAI	JP 1987-15146	A	19870127	<--	
	JP 1987-15147	A	19870127	<--	
	JP 1987-69176	A	19870325	<--	
	JP 1987-109727	A	19870507	<--	
	WO 1988-JP64	W	19880127	<--	
	US 1988-272838	A2	19880927	<--	
	US 1989-426351	A3	19891025	<--	

AB The title paint showing good storability and good performance on metal cans contain film-forming thermosetting resin component comprising epoxy resin and a hardener resin in O/W emulsion form and acrylic polymer dispersant containing carboxy groups in ammonium or amine salt form to provide acid value (based on coating resin) 2-30. A solution of 800 parts bisphenol A epoxy resin (number-average mol. weight 3750, epoxy equivalent 3000) in 800 parts Bu Cellosolve was mixed with a solution of 200 parts bisphenol A-p-cresol-HCHO copolymer (number-average mol. weight 650) in 1:1:1 xylene-MIBK-cyclohexanone, and 160 parts of the mixed solution was mixed with 20 parts 50%-solids 200:200:400:200 Et acrylate-Me methacrylate-methacrylic acid-styrene copolymer

(weight-average mol. weight 120,000, acid value 124) solution in Et Cellosolve, treated slowly with a solution of 2 equiv (based on the carboxy group in the acrylic polymer) Me2NCH2CH2OH in 250 parts water, conductivity in vacuo with removal of 100 parts water and 120 parts organic solvents to give a 40%-solids O/W emulsion storable without skin formation and giving retortable smooth baked coatings on tin-free steel.

IT 85023-89-8

RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, water-thinned, anticorrosive, retortable, for cans)

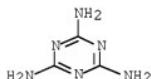
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethyldiene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

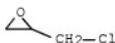
CMF C3 H6 N6



CM 2

CRN 106-89-8

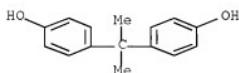
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0

CMF C H2 O

H₂C=O

L137 ANSWER 31 OF 38 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1989:59624 HCAPLUS Full-text

DN 110:59624

TI Outdoor coatings based on epoxy resins and silicon compounds

IN Herzig, Christian; Deubzer, Bernward; Esterbauer, Josef; Frey, Volker

PA Wacker-Chemie G.m.b.H., Fed. Rep. Ger.

SO Ger. Offen., 8 pp.

CODEN: GWXXBX

DT Patent

LA German

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 3709045	A1	19880929	DE 1987-3709045	19870319 <--
	US 4857608	A	19890815	US 1988-166950	19880311 <--
	EP 283009	A2	19880921	EP 1988-104253	19880317 <--
	EP 283009	A3	19900124		
	EP 283009	B1	19940622		

R: BE, CH, DE, FR, GB, IT, LI

PRAI DE 1987-3709045 A 19870319 <--

AB Organosiloxanes with repeating units having the general formula

YaRbSi(OR1)cO4-a-b-c (R = C1-8 hydrocarbyl, R1 = C1-4 alkyl, Y = basic N-containing monovalent Si-bonded organic group, a = 0-1, b = 0-3, c = 0-3) are useful as crosslinkers for epoxy resin outdoor coatings. Thus, 368 parts 75% xylene solution of Me H siloxane-Ph H siloxane copolymer having 3% SiOH groups, Si-bonded organic group-Si atom ratio 1.46:1, and Si-bonded Ph-Me ratio 37:63 was mixed with 180 parts β -aminoethyl γ -aminopropyltrimethoxysilane in 32 parts xylene 3 h at 110° and then at 150°/1 hPa to remove vaporizable components and give a product which provided a 75% xylene solution with viscosity 50 mL2/s at 250°. This solution was mixed (31.1 parts) with bisphenol A-epichlorohydrin copolymer (mol. weight 900) 48.5, MEK 15, MIBK 15, ethylene glycol mono-Et ether 7, xylene 30, 10% melamine resin-xylene solution 4.5, and TiO2 72.3 parts to give a composition with DIN number 4-cup viscosity 28.2 s after aging 24 h, that was applied on steel and dried 3 days to give a coating with MEK double-rub value 170 and pencil hardness 6H, compared with 11 and F, resp., for similar coatings prepared without the aminosiloxane.

IT 85023-89-8, Bisphenol A-epichlorohydrin-formaldehyde-melamine copolymer

RL: TEM (Technical or engineered material use); USES (Uses)
(coatings, outdoor, aminoalkylated siloxane crosslinkers for)

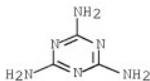
RN 85023-89-8 HCAPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

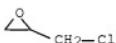
CM 1

CRN 108-78-1

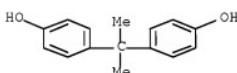
CMF C3 H6 N6



CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

CM 4

CRN 50-00-0
CMF C H2 O $\text{H}_2\text{C}=\text{O}$ L137 ANSWER 32 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
AN 1989:59623 HCPLUS Full-text

DN 110:59623

TI Solvent-based anticorrosive undercoating compositions

IN Kanai, Hiroshi; Oka, Joji; Ueno, Nagaharu; Kimura, Taiichi

PA Nippon Steel Corp., Japan; Nippon Steel Chemical Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.

KIND

DATE

APPLICATION NO.

DATE

PI JP 63170472 A 19880714 JP 1987-1011 19870108 <--
 JP 07091505 B 19951004

PRAI JP 1987-1011 19870108 <--

AB The title compns., giving coatings with good adhesion, formability, and topcoatability, contain 60-90% epoxy resin (number-average mol. weight 900-15,000) and 10-40% SiO₂ (primary particle diameter 1-10 m μ , sp. surface >270 m²/g, surface SiOH concentration >0.25 mmol/100 m²). A mixture of epoxy resin (number-average mol. weight 3800, OH equivalent >90; prepared by heating 150 parts Adeka EP5700 with 8 parts diethanolamine in 100 parts xylene and 50 parts cyclohexanone at 120° for 4 h) 72, Melan-2000 13, and Aerosil-300 15 parts was thinned to 20% solids with 1:1 xylene-cyclohexanone, coated on primed steel, and baked at 200° for 30 s to give a 1- μ coating with good receptivity for cationic electrophoretic coatings.

IT 05023-89-6, Adeka EP5900-formaldehyde-melamine copolymer

RL: USES (Uses)
 (anticorrosive primers, containing silica and melamine resins, with good coatability)

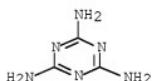
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

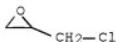
CMF C3 H6 N6



CM 2

CRN 106-89-8

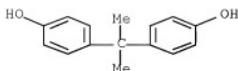
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0
CMF C H₂ OH₂C=OL137 ANSWER 33 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
AN 1988:551594 HCPLUS Full-text

DN 109:151594

TI Polyester-containing high-molecular-weight epoxy resin-precoated sheet
steel.

IN Ogishi, Hideo; Kobayashi, Shigeru; Ichida, Toshiro

PA Kawasaki Steel Corp., Japan

SO Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 63097267	A	19880427	JP 1986-241107	19861009 <-
PRAI JP 1986-241107		19861009 <-		

AB The title sheets with good formability and corrosion resistance at bends are manufactured by applying amino- or mercaptosilane couplers to chemical conversion-treated steel, then applying a primer containing (A) linear polyester having number-average mol. weight (Mn) ≥ 5000, (B) epoxy resins having Mn ≥ 800, epoxy equivalent weight ≤ 2500, and OH content ≥ 3%, and (C) melamine resins, urea resins, blocked isocyanates, and/or phenolic resins at A:B = 50-95:50-5 and (A + B):C = 60-95:40-5. TP 217 polyester (Mn 16,000) 90, Epikote 1001 (Mn 900, epoxy equivalent weight 500, OH content 4%) 10, Cymel 303 11.1, Ti02 56, SrCrO4 56, and thinners 222 parts were ball-milled to give a primer. Phosphated sheet steel was dipped in 5% aqueous SH6020 coupler, dried, coated with a 5-μm layer of the primer, baked, coated with a 20-μm polyester topcoat, and baked to give a coating showing no cracks on bends and good salt water spray resistance.

IT I2597-69-2

RL: MSC (Miscellaneous)

(coating materials, anticorrosive, coil, high-mol.-weight epoxy
resin-polyester blends, for silane-pretreated sheet steel)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

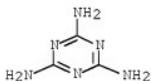
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 85623-89-3, Bisphenol A-epichlorohydrin-formaldehyde-melamine
copolymer

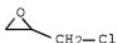
RL: USES (Uses)

(coil coatings, containing high-mol.-weight polyesters, for silane-pretreated steel)
 RN 85023-89-8 HCPLUS
 CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

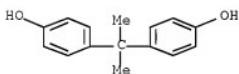
CM 1

CRN 108-78-1
CMF C3 H6 N6

CM 2

CRN 106-89-8
CMF C3 H5 Cl O

CM 3

CRN 80-05-7
CMF C15 H16 O2

CM 4

CRN 50-00-0
CMF C H2 O

L137 ANSWER 34 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 1988:475373 HCPLUS Full-text

DN 109:75373

TI Anticorrosive formable epoxy resin coatings

IN Colon, Ismael; Smith, Donald Foss, Jr.

PA Union Carbide Corp., USA

SO Eur. Pat. Appl., 13 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI EP 262613	A2	19880406	EP 1987-114048	19870925 <--
EP 262613	A3	19891129		
R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
AU 8778669	A	19880331	AU 1987-78869	19870923 <--
DK 8705042	A	19880327	DK 1987-5042	19870925 <--
NO 8704030	A	19880328	NO 1987-4030	19870925 <--
BR 8704943	A	19880517	BR 1987-4943	19870925 <--
JP 63159478	A	19880702	JP 1987-239126	19870925 <--

PRAI US 1986-911815 A 19860926 <--

AB The title coatings comprise epoxy resins, 1-50% modifier resins having reduced viscosity (THF, at 25°) 0.1-2 dL/g, glass temperature (Tg) from -120° to 30°, solubility 1 g/100 g in Cellosolve acetate, mol weight 2000-90,000, and particulate materials and/or crosslinkers. Thus, a composition containing 70:30 blend of Epon 1001 (epoxy resin) and Tone 0260 (caprolactone polyol) 45, solvent 287, particulate Zn 300, antisettling agent 11, silica 2.7, and CaO 1.5 parts was applied to steel test panels primed with Zn/Cr and baked at 260° for 2 min to give coatings having good adhesion and appearance (rated highest) in a formability test (circular samples twice drawn at 305 mm/min).

IT 85023-89-8, Bisphenol A-epichlorohydrin-formaldehyde-melamine copolymer

RL: TEM (Technical or engineered material use); USES (Uses)
 (coatings, containing polyesters, anticorrosive, formable)

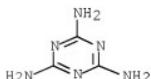
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

CMF C3 H6 N6



CM 2

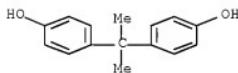
CRN 106-89-8

CMF C3 H5 Cl O



CM 3

CRN 80-05-7
 CMF C15 H16 O2



CM 4

CRN 50-00-0
 CMF C H2 O

 $\text{H}_2\text{C}\equiv\text{O}$

L137 ANSWER 35 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1988:39761 HCPLUS Full-text

DN 108:39761

TI Coated metal sheets having patterns

IN Watanabe, Tadahiko; Akagi, Shingo; Tanabe, Hiroaki; Ishimaru, Mamoru

PA Dainippon Ink and Chemicals, Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 62110783	A	19870521	JP 1985-250953	19851111 <--
JP 03074146	B	19911126		

PRAI JP 1985-250953

19851111 <--

AB Metal sheets are undercoated and coated with basecoats containing fluororesins and optionally coloring agents, pattern layers containing fluororesins and coloring agents, and topcoats containing fluororesins to prepare sheets having good corrosion and weather resistance. A primer contained 100 parts Epikote 1007, 20 parts Super Beckamine L-105, inorg. compds., and solvents. A base coat contained 100 parts Kyral 500 (I), 16 parts PMMA, inorg. compds., and solvents. An ink layer contained 100 parts I, 16 parts PMMA, 30 parts di-Me terephthalate, 70 parts Diapyrroxide 9550 (II; a complex metal oxide pigment), SiO₂, and solvents. A topcoat layer contained 100 parts I, 16 parts PMMA 3 parts II, and solvents.

IT 12597-69-2

RL: MSC (Miscellaneous)

(coating materials, fluororesins, containing coloring agents, on steel)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 85023-89-8

RL: USES (Uses)

(primers, on steel)

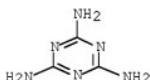
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

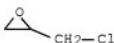
CMF C3 H6 N6



CM 2

CRN 106-89-8

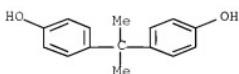
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0
 CMF C H2 O

H₂C=O

L137 ANSWER 36 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 1985:167961 HCPLUS Full-text
 DN 102:167961
 TI Reactive hot-melt adhesives
 PA W. R. Grace and Co., USA
 SO Jpn. Kokai Tokkyo Koho, 19 pp. ADDN to Jpn. Kokai Tokyo Koho Appl. No. 82
 171,086.

CODEN: JKXXAF
 DT Patent
 LA Japanese
 FAN.CNT 4

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 59204611	A	19841120	JP 1983-77363	19830430 <--
	JP 58080317	A	19830514	JP 1982-171086	19821001 <--
PRAI	JP 1982-171086		19821001	<--	
	US 1981-317647	A	19811102	<--	

AB A reactive hot-melt adhesive comprises a thermoplastic polyurethane containing an epoxy side chain, which is prepared by treating an epoxy resin with an isocyanate-terminated polyurethane prepolymer. Thus, 127.8 g polypropylene glycol was treated with 61.4 g toluene diisocyanate for 4 days to give an isocyanate-terminated polyurethane prepolymer. Then, 71.6 g prepolymer was treated with 357 g Epon 1001 F (epoxy resin, OH equivalent 357) in the presence of 6 g dicyandiamide and 1 g Ph3P at 80° for 1 h to give a hot-melt adhesive. A steel plate was coated with the adhesive at 125°, pressed with another steel plate, and cured at 160° for 30 min to give a product having peel strength 3200 psi.

IT 12597-69-2, uses and miscellaneous

RL: USES (Uses)
 (plates, reactive hot-melt adhesives for, polyurethanes with epoxy side chains as)

RN 12597-69-2 HCPLUS

CN Steel (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

IT 78099-73-7

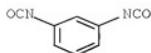
RL: USES (Uses)
 (reactive hot-melt adhesives from, manufacture of)

RN 78099-73-7 HCPLUS

CN Phenol, 4,4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and α-hydro-ω-hydroxypoly[oxy(methyl-1,2-ethanediyl)] (CA INDEX NAME)

CM 1

CRN 26471-62-5
 CMF C9 H6 N2 O2
 CCI IDS



D1—Me

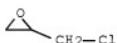
CM 2

CRN 25322-69-4
 CMF (C₃ H₆ O)_n H₂ O
 CCI IDS, PMS



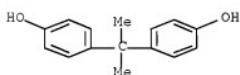
CM 3

CRN 106-89-8
 CMF C₃ H₅ Cl O



CM 4

CRN 80-05-7
 CMF C₁₅ H₁₆ O₂



L137 ANSWER 37 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN
 AN 1984:593318 HCPLUS Full-text
 DN 101:193318

TI Thermoplastic with urethane and pendant epoxy groups and thermosetting adhesive containing it

IN Lin, Shio Ching

PA W. R. Grace and Co., USA

SO Fr. Demande, 42 pp. Addn. to Fr. Demande Appl. No. 82 18282.

CODEN: FRXXBL

DT Patent

LA French
FAN.CNT 4

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI FR 2536753	A2	19840601	FR 1983-7195	19830429 <--
FR 2536753	B2	19870619		
FR 2515659	A1	19830506	FR 1982-18282	19821029 <--
FR 2515659	B1	19870320		
CA 1229192	A1	19871110	CA 1983-423760	19830316 <--
PRAI US 1982-444987	A	19821129	<--	
FR 1982-18282		19821029	<--	
US 1981-317647	A	19811102	<--	

AB An epoxy resin containing ≥ 2 OH groups reacts with a diol-polyisocyanate reaction product to give a melt-processable, thermosetting thermoplastic containing pendant epoxy groups which is applied to substrates as an adhesive and cured by heating, giving strong joints. Thus, 61 g reaction product prepared from 127.8 g polypropylene glycol (mol. weight 725) and 61.4 g TDI was mixed with 6 g dicyandiamide and 100 g reaction product (epoxide equivalent weight 292) prepared from 100 g bisphenol A diglycidyl ether and 15 g bisphenol A. The molten mixture was applied to steel surfaces at 100°, and the surfaces were pressed together and heated 30 min at 180° to give a joint with shear strength 241 + 105 Pa (ASTM D 1002-64, 1.27 cm overlap).

IT 78099-73-7 92488-62-5

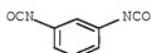
RL: TEM (Technical or engineered material use); USES (Uses)
(adhesives, hot-melt, thermosetting)

RN 78099-73-7 HCAPLUS

CN Phenol, 4, 4'-(1-methylethylidene)bis-, polymer with 2-(chloromethyl)oxirane, 1,3-diisocyanatomethylbenzene and α -hydro- ω -hydroxypoly[oxy(methyl-1,2-ethanediyl)] (CA INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS



D1-Me

CM 2

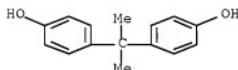
CRN 25322-69-4
CMF (C3 H6 O)n H2 O
CCI IDS, PMS



CM 3

CRN 106-89-8
CMF C3 H5 Cl O

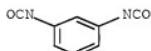
CM 4

CRN 80-05-7
CMF C15 H16 O2

RN 92488-62-5 HCPLUS

CN Phenol, 4,4'-(1-methylethyldene)bis-, polymer with 1,3-diisocyanatomethylbenzene, α -hydro- ω -hydroxypoly[oxy(methyl-1,2-ethanediyl)] and 2,2'-(1-methylethyldene)bis(4,1-phenyleneoxymethylene)bis[oxirane] (9CI) (CA INDEX NAME)

CM 1

CRN 26471-62-5
CMF C9 H6 N2 O2
CCI IDS

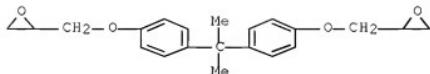
D1-Me

CM 2

CRN 25322-69-4
CMF (C₃H₆O)_n H₂O
CCI IDS, PMS

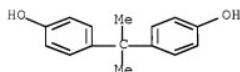
CM 3

CRN 1675-54-3
 CMF C21 H24 O4



CM 4

CRN 80-05-7
 CMF C15 H16 O2



L137 ANSWER 38 OF 38 HCPLUS COPYRIGHT 2007 ACS on STN

AN 1983:127301 HCPLUS Full-text

DN 98:127301

TI Adhesively lap-bonded can

IN Ueno, Hiroshi; Kobayashi, Seishichi; Tsurumaru, Michiko; Machiya, Toshio;
 Miyata, Kenichi; Hayashi, Kiyoshi

PA Toyo Seikan Kaisha, Ltd., Japan

SO Pat. Specif. (Aust.), 71 pp.

CODEN: ALXXAP

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI AU 524369	B2	19820916	AU 1978-42898	19781228 <--
JP 54092483	A	19790721	JP 1977-159332	19771228 <--
JP 58032104	B	19830711		

PRAI JP 1977-159332 A 19771228 <--

AB Heat-resistant lap-bonded cans are prepared by coating the lap-bond portion of a Sn-free steel can blank with an enamel comprising an epoxy resin and a polycyclic polyhydric phenol-containing phenol-aldehyde resin to form an interposing adhesive layer, coating the remainder of the can blank with an anticorrosion enamel comprising a thermosetting resin different from the above adhesive, applying a polyamide-type adhesive to the interposing adhesive layer, lapping the lap-bond portion while the polyamide is still molten, and pressing the lap-bond portion while cooling to effect the lap-bonding. Thus, the outer face of a Sn-free steel can blank was coated with bisphenol A-o-cresol-p-cresol-epichlorohydrin-formaldehyde copolymer (I) [85023-86-5] and

baked 10 min at 190° to give a 2- μ thick coating. The inner surface was stripe-coated with I and baked 10 min at 210° to give a 5- μ thick coating. Then, bisphenol A-p-tert-butylphenol-p-cresol- epichlorohydrin-formaldehyde-phenol copolymer [85023-87-6] was coated on the inner surface, except the portion to be bonded, and baked 10 min at 205° to give a 5- μ thick coating. The outer surface was printed and coated with a finishing varnish by customary procedures. Each of the side edges in the longitudinal direction was preheated along a width of 7-8 mm to 270° by high-frequency heating, and a tape of nylon 12 [24937-16-4] adhesive was roll-pressed along the 2 side edges and cooled. The can blank was formed into a cylindrical shape, and the 2 adhesive edges were heated to 250°, pressed together for 30 ms, and cooled to give a can body which was flanged and double-seamed with an Al lid. After heating 100 of the cans 90 min at 130°, there were no broken cans.

IT 85023-89-8

RL: USES (Uses)

(coatings, for adhesive-bonded cans)

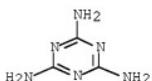
RN 85023-89-8 HCPLUS

CN Formaldehyde, polymer with 2-(chloromethyl)oxirane, 4,4'-(1-methylethylidene)bis[phenol] and 1,3,5-triazine-2,4,6-triamine (CA INDEX NAME)

CM 1

CRN 108-78-1

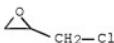
CMF C3 H6 N6



CM 2

CRN 106-89-8

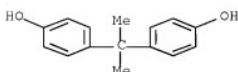
CMF C3 H5 Cl O



CM 3

CRN 80-05-7

CMF C15 H16 O2



CM 4

CRN 50-00-0
CMF C H2 OH₂C=O

=> d his

(FILE 'HOME' ENTERED AT 07:23:40 ON 02 OCT 2007)
SET COST OFF

FILE 'REGISTRY' ENTERED AT 07:23:51 ON 02 OCT 2007

L1 STR
 L2 SCR 2043
 L3 50 S L1 AND L2
 L4 65274 S L1 AND L2 FUL
 L5 29350 S L4 AND OC2/ES
 L6 2925 S L4 AND CH2O
 L7 13421 S L4 AND (C2H4O OR C3H6O OR C4H8O OR C5H10O OR C6H12O)
 L8 38913 S L5-L7
 L9 18970 S L8 AND N/ELS
 L10 1692 S L8 AND NCNCNC/ES
 L11 STR
 L12 50 S L11 SAM SUB=L8
 L13 5777 S L11 FUL SUB=L8
 SAV TEMP L13 LAVILLA559C/A
 L14 1386 S L10 NOT L13
 L15 1 S 12597-69-2
 L16 96307 S STEEL
 L17 96306 S L16 NOT L15
 L18 8978 S L8 AND UNSPECIFIED
 L19 9325 S L9 NOT L10,L13,L18

FILE 'HCAPLUS' ENTERED AT 07:34:31 ON 02 OCT 2007

L20 3584 S L13
 L21 859 S L14
 L22 6051 S L18
 L23 12204 S L19
 L24 221872 S L15
 L25 743006 S STEEL
 L26 21866 S STEEL?/CT,CW
 E STEEL/CT
 E E3+ALL
 L27 332682 S E5+NT
 E E54+ALL
 E E14+ALL
 L28 12496 S E4+OLD
 L29 4497 S L26 NOT L27,L28
 L30 1786 S L20-L23 AND L24-L29
 L31 6696 S L20-L23 AND PY<=2004 NOT P/DT
 L32 11614 S L20-L23 AND (PD<=20040614 OR PRD<=20040614 OR AD<=20040614) A

L33 18310 S L31,L32
 L34 1650 S L33 AND L30
 L35 336 S L17 AND L33
 L36 1797 S L34,L35

FILE 'REGISTRY' ENTERED AT 07:39:54 ON 02 OCT 2007

FILE 'HCAPLUS' ENTERED AT 07:39:56 ON 02 OCT 2007
 L37 TRA L36 1- RN : 8945 TERMS

FILE 'REGISTRY' ENTERED AT 07:40:38 ON 02 OCT 2007

L38 8945 SEA L37
 L39 1 S L38 AND 7664-38-2
 L40 27 S L38 AND 6/F
 L41 16 S L40 NOT PMS/CI
 L42 7 S L41 AND 2/NC AND NR>=1
 L43 9 S L41 NOT L42
 L44 7 S L43 NOT C6/ES
 L45 6 S L44 NOT C4H86NO3
 L46 126 S L38 AND SI/ELS NOT (PMS OR AYS OR TIS OR CCS)/CI
 L47 39 S L46 AND NC>=2
 L48 7 S L47 AND (H4O4SI OR H2O3SI)
 L49 87 S L46 NOT L47
 L50 84 S L49 NOT O2SI
 L51 83 S L50 NOT SI/ME
 L52 234 S L38 AND (ZN OR AL)/ELS
 L53 232 S L38 AND (ZINC OR ALUMIN?)
 L54 142 S L38 AND (7440-66-6 OR 7429-90-5)/CRN
 L55 240 S L52-L54
 L56 97 S L55 NOT (AYS OR TIS)/CI
 L57 70 S L56 NOT (PMS OR CCS)/CI
 L58 27 S L56 NOT L57
 L59 143 S L55 NOT L56
 L60 140 S L59 NOT L17

FILE 'HCAPLUS' ENTERED AT 07:50:19 ON 02 OCT 2007

L61 40 S L39,L45 AND L36
 L62 143 S L48,L51 AND L36
 L63 140 S L60 AND L36
 L64 24 S L61 AND L62,L63
 L65 16 S L62 AND L63
 L66 31 S L64,L65
 L67 47 S L61,L66
 L68 4 S L67 NOT ?EPOX?
 SEL AN 2
 L69 1 S E1-E2 AND L68
 L70 43 S L67 NOT L68
 SEL HIT RN

FILE 'REGISTRY' ENTERED AT 08:06:17 ON 02 OCT 2007

L71 165 S E3-E167
 L72 88 S L71 AND L8
 L73 29 S L72 AND L13
 L74 15 S L72 AND L14
 L75 49 S L72 AND L18,L19
 L76 7 S L74 NOT (P OR S)/ELS
 L77 31 S L75 AND UNSPECIFIED
 L78 24 S L77 NOT 502-44-3/CRN
 L79 22 S L78 NOT C6H6O
 L80 21 S L79 NOT C3H4O2

L81 20 S L80 NOT C8H6O4
 L82 18 S L81 NOT C2H4N4
 SEL RN 9-12 17
 L83 13 S L82 NOT E168-E172
 SEL RN L76 4
 L84 1 S E173
 L85 7 S L73 NOT C6H10O2
 L86 6 S L85 NOT C5H12O2
 L87 4 S L86 NOT N2CNC/ES
 L88 23 S L78 NOT L87
 L89 11 S L88 NOT L83,L84
 L90 16 S L83,L84,L87
 L91 12 S 124057-69-8 OR 112154-00-4 OR 72429-63-1 OR 120299-87-8 OR 19
 L92 4 S L90 AND (72429-63-1 OR 199876-59-0 OR 174514-92-2 OR 124671-4
 L93 4 S L91 AND (72429-63-1 OR 199876-59-0 OR 174514-92-2 OR 124671-4
 L94 1 S 66810-89-7
 L95 7 S L87,L92

FILE 'HCAPLUS' ENTERED AT 08:28:31 ON 02 OCT 2007

L96 27 S L95
 L97 0 S L96 AND PY<=2004 NOT P/DT
 L98 22 S L96 AND (PD<=20040614 OR PRD<=20040614 OR AD<=20040614) AND P
 L99 16 S L98 AND STEEL
 L100 10 S L98 AND STEEL?/CW,CT
 L101 16 S L98 AND L25-L28
 L102 8 S L98 AND L15
 SEL RN L98

FILE 'REGISTRY' ENTERED AT 08:30:10 ON 02 OCT 2007

L103 228 S E174-E401
 L104 3 S L103 AND L16

FILE 'HCAPLUS' ENTERED AT 08:30:37 ON 02 OCT 2007

L105 10 S L104 AND L98
 L106 17 S L99-L102,L105
 L107 5 S L98 NOT L106

FILE 'REGISTRY' ENTERED AT 08:31:53 ON 02 OCT 2007

L108 35 S L103 AND ((ZN OR AL)/ELS OR ZINC OR ALUMIN? OR (7440-66-6 OR
 L109 27 S L108 AND (AYS OR TIS)/CI
 L110 1 S L103 AND L39
 L111 4 S L103 AND 6/F
 L112 10 S L103 AND SI/ELS NOT (STEEL OR (AYS OR TIS OR PMS)/CI)
 L113 8 S L112 NOT (F6SI OR O2SI)

FILE 'HCAPLUS' ENTERED AT 08:33:51 ON 02 OCT 2007

L114 11 S L98 AND L104,L110,L111,L113
 L115 10 S L98 AND L109
 L116 22 S L98-L102,L105-L107,L114-L115

FILE 'REGISTRY' ENTERED AT 08:34:34 ON 02 OCT 2007

FILE 'HCAPLUS' ENTERED AT 08:34:56 ON 02 OCT 2007

FILE 'REGISTRY' ENTERED AT 08:35:29 ON 02 OCT 2007

L117 53 S L103 AND L4
 L118 32 S L117 AND L13
 L119 28 S L118 NOT L95
 L120 46 S L117 NOT L95
 L121 46 S L119,L120

L122 45 S L121 NOT N2CNC/ES
L123 3 S 134498-50-3 OR 184181-66-6 OR 39320-64-4
SEL RN L122 11-13 16 30 34 35 37 38 40 41
L124 11 S E402-E412

FILE 'HCAPLUS' ENTERED AT 08:44:32 ON 02 OCT 2007

L125 98 S L124
L126 2 S L125 AND PY<=2004 NOT P/DT
L127 88 S L125 AND (PD<=20040614 OR PRD<=20040614 OR AD<=20040614) AND
L128 90 S L126,L127
L129 38 S L128 AND STEEL
L130 24 S L128 AND L26-L29
L131 16 S L128 AND L15
L132 38 S L129-L131
L133 4 S L132 AND L110,L111
L134 7 S L132 AND L109
L135 9 S L133,L134
L136 29 S L132 NOT L135
L137 38 S L135,L136

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